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PROGRAM OF THE FEDERAL WATER POLLUTION CONTROL ADMINISTRATION

Federal Water Pollution Control Administration
Washington, D. C.

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PROGRAM OF THE
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION

Prepared by

Office of Program Plans and Development
Federal Water Pollution Control Administration

July 1967

U.S. DEPARTMENT OF THE INTERIOR
Federal Water Pollution Control Administration
633 Indiana Avenue, N.W.
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Foreword

This book presents information on the Federal Water Pollution Control program. It contains a review of the problem, the Federal program to solve the problem, and the existing capability for implementing a solution. The book has been written as a general reference for those who have a need for some substantive information on water pollution and the efforts now employed to combat it.

The present book has been revised and updated from a document prepared in January, 1967. The fact that a new edition has been issued so soon is evidence of the dynamics of the program, for if there is anything characteristic of the pollution control effort it is change.

Events influencing these changes occur so fast and so frequently that a lasting statement of the problem and the means to solve it cannot be prepared. The recent Torrey Canyon incident off the coast of England was dramatic evidence that Federal oil pollution control programs would be inadequate to handle a similar catastrophe if it had occurred here. A review of steps needed to combat the oil pollution problem is presently under way and is likely to lead to new and improved practices for controlling and preventing such disasters. Another example of the fast moving events concerns water quality standards. Within the next few months standards for interstate and coastal waters will be established. Programs to achieve goals set by the standards will be well on their way to comply with the implementation plan required by the Water Quality Act of 1965.

The water pollution problem is a large and complex one. More and more people are concerned about the quality of the Nation's waters. But concern is only part of the need; accurate and up-to-date information on the subject and the efforts to combat the problem are required as well. This book is designed for just that purpose. If it succeeds in that effort, the attack on water pollution will have advanced one more step.

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INTRODUCTION

Water is a precious commodity, though most people simply take it for granted until the supply runs low in quantity or quality. This is occurring with increasing frequency in many areas today. Actually, we are not running out of water, for even the areas of sparse rainfall find ways to supplement their natural water sources. The problems, where critical, usually stem from man's mismanagement of the water quality.

In general, the whole challenge in water management is one of making nature's relatively fixed supply meet today's increasing demands. Quite simply, it is a matter of having water of the right quality and the right quantity in the right place at the right time. One key to the situation is preserving and improving water quality by preventing and controlling the pollutants entering our rivers, lakes, streams, and ground and coastal waters.

Initially, water pollution control measures were chiefly aimed at controlling water-borne diseases. Health authorities and sanitary engineers depended upon the stream's natural purifying capacity for the wastes it carried, and upon the water treatment plant for the drinking waters it supplied. If provided at all, waste treatment merely removed the gross and most objectionable forms of pollution--those which were offensive to man and destroyed fish and wildlife. Today, the concepts have changed. Water pollution control is now designed to permit a wide variety of water uses--municipal supply, agricultural, industrial, recreational, and a habitat for fish and wildlife.

This change in basic attitude has come none too soon. Where yesterday's water needs were relatively simple and easily met, today's demands are for water of much higher quality and in much greater volume. At the same time, the wastes in our waters have increased sharply and changed drastically in character and complexity.

It all adds up to a national water pollution problem of sizable dimensions. Cities and factories are the major sources. In a 1966 survey, 2979 U.S. communities--total population 31.3 million--were found to be discharging raw or inadequately treated sewage into the Nation's streams and there is reason to believe that this survey seriously underestimated the magnitude of the problem. Every year another 1000 U.S. communities outgrow their treatment facilities, while in others facilities are obsolescent or poorly managed. In some cities today, even the treated effluents have polluting effects approaching and sometimes greater than the raw sewage discharges of 30 years ago. As a general rule, secondary treatment is now required to achieve a fairly high water quality yet more than half of the U.S. urban population is served by facilities below that standard.

In 1964, the latest year for which statistics are available, there were 8925 manufacturing plants in the U.S. using, individually, more than 20 million gallons of water annually. Together they accounted for about 97 percent of all industrial water use. This water is affected by changes in temperature or by substances that reduce its quality. Only 30 percent of the water used by these manufacturing plants received any treatment before disposal. Much of the treatment that is provided for factory waste waters occurs in municipal treatment plants.

Municipal sewers that carry both sanitary and storm waters are another and especially troublesome source of pollution. These so-called combined sewers are relics of earlier days when city public works construction provided no sewage treatment. But even if a city has adequate facilities to treat its sewage, the contents of these sewers must be discharged, during rainstorms, without going through the treatment plant. This prevents flooding or overloading at the plant, but puts untreated sewage in the streams. In 1962, there were over 1300 communities with totally combined sewer systems serving about 26 million people. Another 620 communities of about 34 million population have systems which are partially of the combined type. Most U.S. communities, however, are served by sewer systems which separate the sanitary wastes from the storm waters. About 9000 communities with a total population of 57 million are in this category.

Acid mine-drainage is another long standing source of water pollution. The chemical quality of water is altered in streams receiving such drainage. The acid flow destroys fish and fish food organisms, damages recreational and aesthetic values, corrodes transport equipment, bridges, and other structures exposed to the water. Waters so polluted require extra and expensive treatment when utilized for municipal and industrial water supplies. Acid drainage is associated with active as well as abandoned coal mining operations; the latter continue to produce acid for indefinite periods after mining is discontinued. An estimated 3.5 million tons of acid mine waters drain into the streams of the United States annually, damaging approximately 4000 miles of streams.

The estuarine and coastal waters of the United States have been subjected to serious and increasing pollution for many years. Estuaries are remarkably fertile, being natural traps for nutrients. They are also traps for pollutants which can collect and concentrate in them. The magnitude of this pollution problem is clearer if we realize that 60 percent of the people in the United States live within a 250-mile coastal strip bordering the Atlantic, the Gulf of Mexico and the Pacific Ocean. Two-thirds of the factories making agricultural pesticides, two-thirds of those making organic chemical products, 58 percent of the petroleum refineries, and two-thirds of the pulp mills of the nation are located in the coastal States. But less than one-third of the industrial waste waters going into these waters is treated.

Drainage from urban streets is a peculiar and complex pollution problem. While little data have been developed on this subject, it is known that salts, fly ash, pesticides, fertilizers, animal wastes, oil, gasoline, silts, and gravels are carried through sewers by rains or by street washing, and deposited, largely untreated, into rivers and streams.

Major forms of pollution associated with agricultural operations are nutrients and pesticides, concentrations of salts and other pollutants in return flows from irrigation systems, and silt from soil erosion. The pollution that results from irrigation return flows presents serious and not easily solvable problems.

Farm animal wastes enter streams, rivers, or lakes either in the form of surface run-off or through seepage. In some watersheds, farm animals contribute considerably more wastes than do humans; the drainage from certain land areas supporting large animal populations leads to significant water contamination, perhaps as much as ten times that from the human population.

Logging operations can contribute to the deterioration of water quality. Polluting substances which are likely to enter a watercourse from timber harvesting and management activities are silt, logs, brush, decayed vegetation, pesticides, cinders, oil, gasoline, and logging camp wastes. Silt is frequently washed into streams from hauling roads, skid trails, and burned-over areas.

Wastes from ships and boats are still another cause of pollution. This form of pollution is most severe in bays, inlets, harbors, and marinas. The pollutants which they discharge include sewage, oils, chemicals, and other wastes. Most vessels are not equipped to give even minimal treatment to sewage and other wastes. The growing popularity of recreation craft is likely to increase this source of pollution to even more significant proportions than is true at present.

Oil accidently spilled from tankers or discharged in the course of cleaning often has severe consequences to fish and wildlife, shellfish and recreation beaches. Untold ecological damages may result not only from the oil itself but also from chemicals used in attempting to deal with the problem. Pollution from this source is likely to increase as even larger bulk tankers come into service.

Construction activities that affect the quality of water relate to housing development, roads, railroads, power transmission lines, mines and dams. The polluting substances which are likely to enter streams during and after construction include silt, chemicals, oil, gasoline, litter thrown from vehicles, and wastes from construction camps. The control of soil erosion during and after construction is also essential to maintaining water quality.

Overfertilization of some lakes by inorganic nutrients such as nitrogen and phosphorous compounds has speeded up the natural lake aging process known as eutrophication. The increased nutrient load comes from inadequately treated wastes, from land run-off, and from natural pollution. Lake Erie is a notable example of accelerated eutrophication. There are many others.

Radioactive wastes constitute a new contaminant to the Nation's waters. Radioactive substances come from such sources as uranium mining and refining, from power reactors, certain industrial, medical or research operations, and from fallout following nuclear weapons testing.

Heat pollution from industrial and power plant sources can be expected to increase at a very substantial rate, based on projections of industrial growth and electric power demands. Increased water temperatures affect a stream's capacity to assimilate wastes. Heat also can ruin water for fishing and recreation.

This generally describes some of the pollution problems, their magnitude, and the sources of the wastes which are damaging the Nation's waters. The use of water is increasing at a very rapid rate. At present 22 billion gallons are used daily for municipal supplies, 170 billion gallons daily for manufacturing industry, and 153 billion gallons daily for irrigated agriculture.

By 1980, these uses are expected to reach a total of 600 billion gallons daily. By the year 2000, the total will reach 1,000 billion gallons daily. The total dependable fresh water supply available by 1980 (that is, streamflow, lakes, ground water, and reservoir storage), will be 650 billion gallons daily or much less than the 1980 demand. This disparity indicates that water will have to be reused on a larger and larger scale. Actually, water is reused now, because withdrawal, use, and disposal of water by successive communities, industrial operations, and farms takes place many times along the length of a river or lake.

But these water-use figures refer only to "withdrawal" uses. Equally important are the uses that do not require withdrawal--the uses that take place in the water itself, such as navigation, recreation, fishing, shellfish production, and so on. The aesthetics and amenities associated with water use are also considerations, since much of the public protest against pollution is inspired by sensory offenses. The public expects a body of water to be attractive and refreshing, even beautiful. Pollution turns this expectation to disappointment and often disgust.

The costs of water pollution to the Nation are enormous. While no accurate tabulation of costs is available, one recent estimate put the figure at $12 billion annually. Pollution imposes costs on individuals, industries, communities and the Nation. Some losses are direct, some indirect.

The direct losses, such as added costs of water treatment, are relatively easy to determine. The indirect losses, such as those resulting from the closing of recreation beaches, destruction of shellfish beds, and decline in use of once-favored boating areas, are more difficult to estimate, but are unquestionably large. Even more intangible, but equally important, are the widespread aesthetic nuisances resulting from the smell of open sewers and the sight of debris-choked streams.

The costs of remedying the situation also involve many unknowns. According to one frequently quoted estimate, providing secondary treatment by 1975 for 80 percent of the population would, alone, cost $20 billion. In addition, there will be major costs in controlling combined sewer discharges and stormwater runoff, before many of our urban rivers are clean enough to support recreational and other uses.

Estimates on the investment required for pollution control by industry are much sketchier. Although some segments of industry have made commendable progress in the treatment of their wastes, a much larger segment has not begun to meet its responsibilities for controlling the pollution it creates. It has been estimated that the annual expenditures necessary to overcome the backlog of unmet needs and to keep pace with industrial growth will be at least equal to those required for the construction of municipal works.

Other costs involved in some areas are those necessary to control acid mine drainage and agricultural pollution, to regulate streamflows, and to take other steps necessary to assure clean water. Here, too, data are sketchy.

There is an obvious and essential need for good information on the costs of water pollution control in order to undertake a systematic attack on the problem. The Federal Water Pollution Control Administration is currently engaged in developing information on pollution control costs and making a complete assessment of them. A report on this subject will be submitted to the Congress by January 10, 1968, and updated each year thereafter by the Federal Water Pollution Control Administration.

The Nation stands at a point in time when it can and must reverse the course of pollution. The price is high. But, whatever the costs, more and more Americans are concerned and insisting that polluted waters be cleaned up and kept clean. Practically every poll indicates that the majority of citizens believe that too little is being done about water pollution in this country.

THE FEDERAL PROGRAM

The existing Federal program has come a long way from its earliest beginnings when emphasis was confined to the public health aspects of water pollution. As early as 1897, bills were introduced in the Congress calling for extensive investigations of pollution of water supplies. In 1912, the Public Health Service was authorized to carry on investigations of the pollution of navigable streams and lakes by sewage and other causes. The Public Health Service, by virtue of experience gained in enforcing Interstate Quarantine Laws, was given responsibility for suppression of water-borne diseases and worked closely with State health agencies to that end.

Although many bills were introduced earlier, it was not until 1948 that legislation was enacted aimed specifically at water pollution control. This was Public Law 80-845--a measure providing only for an experimental water pollution control program.

Before 1948, Federal legislation for water pollution was mostly confined to control of pollution of coastal waters from oil discharged by ships, to research and surveys, and to technical assistance to State and local governments, chiefly in regard to water-borne diseases. Permanent water pollution control legislation was enacted July 9, 1956, with the passage of the Federal Water Pollution Control Act, Public Law 84-660.

This Act provided legislation of a comprehensive nature and permitted Federal participation in a wide variety of activities, including Federal-State cooperation in developing comprehensive programs, increased technical assistance, intensified and broadened research, grants for the support of State programs and for construction of waste treatment works, and modified and simplified enforcement measures for controlling pollution of interstate waters.

The 1956 Act was substantially amended by Public Law 87-88 which was signed into law on July 20, 1961. This new Act considerably strengthened and extended the previous law, especially in the areas of enforcement, grants, and research.

The Water Quality Act of 1965, Public Law 89-234, was signed by the President on October 2, 1965. Pursuant to Section 2 of this Act, the Federal Water Pollution Control Administration was established 60 days after the Act was signed, on December 31, 1965, in the Department of Health, Education, and Welfare. Previously, the Federal water pollution program had been conducted by the Division of Water Supply and Pollution Control, Bureau of State Services, Public Health Service, Department of Health, Education, and Welfare.

Public Law 89-234 provided for grants for research and development on better methods of controlling pollution from stormwater and combined sewer overflows, for increased amounts for constructing sewage treatment works, and a program to establish water quality standards on interstate streams.

The Administration, as well as most functions of the Secretary of Health, Education, and Welfare authorized by the Federal Water Pollution Control Act, as amended, was transferred to the Secretary of the Interior and his Department by Reorganization Plan No. 2, which became effective May 10, 1966.

On November 3, 1966, the Clean Water Restoration Act became law. This landmark legislation, together with the Water Quality Act of 1965, signaled a new era for water pollution control in the United States. A copy of the Federal Water Pollution Control Act, as amended, is included in the appendix. Reorganization Plan No. 2 is also included in the appendix.

The Federal Water Pollution Control Act sets forth the objective of the Federal program: to provide a supply of water of adequate quality for all beneficial purposes including public water supply, propagation of fish and aquatic life, recreational purposes, and agricultural and industrial uses. The objective is a broad one, and requires a diverse effort to reach it. The many tools available are being utilized through an approach designed to clean up pollution in entire river basins. This effort brings together the establishment of standards for interstate streams, construction of waste treatment facilities on a high priority basis, research and demonstration projects, and support for river basin organizations and their programs.

This whole effort is far different from the "study and advise" attitude prevalent in 1912. The old Federal programs of grants, information dispersal, and enforcement as a last resort are now recognized as inadequate by the Congress and the public.

Entirely new concepts guide the Federal effort today. When once water was permitted to be polluted up to the extent health and welfare were endangered, it is now believed that much more must be achieved if we are to get full use from our water resources.

Technology in most situations has advanced to the point where this can be done if available knowledge is applied. Many difficult problems exist that require research and highly sophisticated skills. But in mid 1967, with the largest collection of tools ever assembled to control pollution, the possibility of obtaining a quality of water that is a credit to our Nation is within sight.

It is further believed that the present condition of our waters must be improved quickly--not in some distant future, but within the next few years. In a great many cases, very simple applications of techniques developed years ago will suffice to bring about marked changes in water quality in many areas. Where more difficult problems exist, all the skills and programs available will be employed on a reasonable basis which is consistent with getting the job done as soon as possible.

The Federal role in water pollution control has become a very significant one. But the solution to the problem depends on close cooperation with State and local units of government. By working together and applying their respective capabilities, the job can and will be done.

The following sections describe the array of Federal programs--some old, some new--available to solve the problem.

GRANTS

Grants provide support for activities that contribute directly or indirectly to the prevention and control of water pollution. The amount of support and matching requirements varies greatly from program to program. The grant programs administered by the Federal Water Pollution Control Administration are briefly described below and in more detail in the appendix.

Grants for Waste Treatment Works Construction

Grants are provided to assist in construction of waste treatment works, including the intercepting and outfall sewers needed to prevent discharge of inadequately treated sewage or other wastes into the Nation's streams, lakes, and coastal waters. Federal grants are available to States, municipalities, and interstate or intermunicipal agencies. Projects so aided must be included in comprehensive programs developed under the Federal Water Pollution Control Act, as amended. Each project must be approved by the State water pollution control agency as well as the Federal Water Pollution Control Administration. Project priorities are determined by the State agency on the basis of financial as well as water pollution control needs.

Grants are authorized for at least 30 percent of the eligible cost of the project. Prior to July 1, 1967, such grants were limited to $1,200,000 for single municipal projects and to $4,800,000 for multi-municipal projects. These limitations have been removed.

Federal participation may be increased to 40 percent if the State agrees to pay not less than 30 percent of the cost of all projects receiving Federal grants within the State. The Federal participation may be increased to 50 percent if the State agrees to pay not less than 25 percent, and enforceable water quality standards have been established for the water into which the project will discharge. In metropolitan areas, the grant may be increased by 10 percent of the amount of the grant if the project is in conformity with a comprehensive metropolitan plan.

Allotted sums which are not obligated within a specified period are subject to reallotment to other States. Prior to reallotment, however, these funds may be used to finance supplemental grants for projects where the need for sewage treatment works is attributable in part to a Federal institution or Federal construction activity.

Projects on which construction was started after June 30, 1966, without Federal assistance or with a lesser amount of such assistance than authorized because of inadequate Federal funds, may be eligible for reimbursement if funds are made available and, if the projects are approved by the State water pollution control agency and the Secretary of the Interior. This provision in the Act enables cities to proceed with planned construction projects and be reimbursed should adequate funds for this purpose be appropriated by Congress at a later date.

Grantees are required to pay all costs not covered by the Federal construction grant and to assure proper and efficient operation of the treatment works after completion.

The Clean Water Restoration Act of 1966 authorized appropriations for this program as follows: $450 million for fiscal year 1968; $700 million for fiscal year 1969; $1 billion for fiscal year 1970; and $1.25 billion for fiscal year 1971. Grants allocations for each State are listed in the appendix.

Data on Federal grants to municipalities and grant application forms may be obtained from the Office of Facilities Programs, Division of Construction Grants, Federal Water Pollution Control Administration, 633 Indiana Avenue, N.W., Washington, D. C. 20242.

Appalachian Regional Development Sewage Treatment Works

The purpose of this program is to assist in preventing pollution of the streams in the Appalachian region, and to protect the health and welfare of its citizens. States, political subdivisions, or local development districts in the region are eligible for aid.

Section 212 of the Appalachian Regional Development Act of 1965 authorized grants for the construction of sewage treatment works in accordance with provisions of the Federal Water Pollution Control Act, without regard to the appropriation authorization ceilings or to allotments among the States prescribed in the latter Act. Section 214 of the Appalachian Regional Development Act authorizes increased Federal contributions where the State or community cannot meet matching provisions for a program under which they would otherwise be eligible.

The matching requirements are in accordance with the provisions of the Federal Water Pollution Control Act. On specific recommendation of the Appalachian Regional Commission, grants made under the Federal Water Pollution Control program, or under this specific authorization, may be increased up to 80 percent of total project cost.

Application for grants are made by eligible groups, through the State member of the Appalachian Regional Commission representing such applicant. Only those applications approved by a State member as meeting the requirements of the Appalachian Regional Development Act will be approved by the Commission.

Additional information on this program may be obtained from the Office of Facilities Programs, Division of Construction Grants, Federal Water Pollution Control Administration, 633 Indiana Avenue, N.W., Washington, D. C., 20242.

Grants for State and Interstate Agency Programs

This program is designed to provide assistance to State and interstate water pollution agencies in the administration of their programs. The Clean Water Restoration Act of 1966 increased the authorized amount from $5,000,000 to $10,000,000 annually, beginning in fiscal year 1968; the authorization runs to June 30, 1971. Along with other purposes, the new Act specifies that funds are to be used for training of public agency personnel.

In this type of grant, the amount available for distribution to States is allotted annually on the basis of a formula which considers population, the extent of the water pollution problem, and financial need. The amount allotted to each State comprises the sum of three subsidiary distributions: (a) a basic grant of $12,000 is allotted to each State; (b) of the available remainder of the appropriation, two-thirds is prorated in proportion to population, weighted by a reciprocal of average personal income per capita (thus proportionately larger shares are available to States with lower average income); and (c) the remaining one-third of the available appropriation is prorated according to the extent of the water pollution problem. That is, half of this last distribution is allotted according to the relative density of population in the several States, and half according to the number of industrial establishments discharging industrial wastes.

The law does not specify provisions for distribution of funds among interstate agencies. By regulation contained in the Federal Register, the sum available for interstate agencies is allotted among eligible agencies by calculating distributions (b) and (c) above, in terms of the data for the several States composing each interstate agency. Guidelines to assist States in applying for program grants were issued by the Administration in April, 1967.

Program grants allocated to States and interstate agencies are provided in the appendix.

Additional information may be obtained from the Office of Comprehensive Planning and Programs, Federal Water Pollution Control Administration, 633 Indiana Avenue, N.W., Washington, D. C. 20242.

Grants for Comprehensive Basin Plans for Water Quality Control and Abatement

The Clean Water Restoration Act of 1966 authorized the Secretary of the Interior to provide grants at the request of a State Governor, or, if more than one State is involved, a majority of the governors, for the administrative expenses of a planning agency for developing an effective, comprehensive water quality control and abatement plan for a basin. Each grant may not exceed 50 percent of the administrative expenses of a planning agency for not more than three years.

The planning agency must provide for adequate representation of appropriate State, interstate, local, or, when appropriate, international interests in the basin or portion thereof. The agency must be capable of developing an effective, comprehensive water quality control and abatement plan for a basin.

Each recipient agency must develop a plan which (1) is consistent with any applicable water quality standards established pursuant to current law within the basin; (2) recommends treatment works and sewer systems conducive to the most effective and economical means of waste collection, storage, treatment, and purification, and recommends means to encourage both municipal and industrial use of such works and systems; and (3) recommends maintenance and improvement of water quality standards within the basin and methods of adequately financing facilities necessary to implement the plan. Guidelines to assist in applying for grants will be available soon.

Additional information may be obtained from the Office of Comprehensive Planning and Programs, Division of Planning Grants, Federal Water Pollution Control Administration, 633 Indiana Avenue, N.W., Washington, D. C. 20242.

Grants for Research and Development

The Water Quality Act of 1965 and the Clean Water Restoration Act of 1966 authorized grants to develop new and improved methods for controlling water pollution. Research and development grants for this purpose are specifically authorized for projects concerned with (a) storm and combined sewers; (b) advanced waste treatment and joint treatment systems for municipal and industrial wastes; and (c) methods for prevention of pollution by industry, including treatment of industrial wastes.

Taking these up in order:

(a) The storm and combined sewer program provides grants to States, municipalities, or intermunicipal or interstate agencies for developing new or improved methods for controlling wastes from sewers carrying storm and/or sewage wastes. The Federal share may be up to 75 percent of the project cost. Projects must be approved by the State water pollution control agency or agencies and the Secretary of the Interior, and must be a useful demonstration of the purposes set forth in the Act.

(b) Grants for advanced waste treatment and joint industrial-municipal waste treatment systems may be made available to any State, municipality, or intermunicipal or interstate agency. These grants are to assist in development of projects to demonstrate advanced waste treatment and water purification methods, or to develop or demonstrate new or improved methods of joint treatment systems for municipal and industrial wastes. Grants must be approved by appropriate State water pollution control agency or agencies, and by the Secretary of the Interior. Grants may not exceed 75 percent of project cost.

(c) Grants are available to persons for research and demonstration projects for prevention of pollution by industry, including, but not limited to, treatment of industrial wastes. Grants may not exceed $1 million, or 70 percent of the project cost. Projects assisted must serve a useful purpose in the development or demonstration of new or improved treatment methods or other means of preventing pollution by industry. Methods must also have industry wide application.

Appropriations for these three types of grants were authorized by the Clean Water Restoration Act as follows: $20 million for each of four fiscal years, 1966 through 1969, for the programs described under (a), (b), and (c) above; $20 million for each of three fiscal years, 1967 through 1969, for grants described under (b) above; and $20 million for each of three fiscal years, 1967 through 1969, for grants described under (c) above.

Additional information and application forms may be obtained from the Office of Research and Development, Federal Water Pollution Control Administration, 633 Indiana Avenue, N.W., Washington, D. C. 20242.

Research, Training, Demonstration and Research Fellowship Grants

These grants are intended to encourage and assist appropriate agencies, institutions, and individuals in the conduct of studies and training which will help achieve the objectives of the Federal Water Pollution Control Act.

Research grants are awarded to individuals to conduct basic and applied research projects in water supply and pollution control. Grants are to expand such research throughout the country, and encourage investigators to undertake research in neglected areas.

Training grants are awarded to institutions to establish or expand training in water supply and pollution control. Grants support programs in a variety of university departments and include funds for expansion and improvement of facilities and payment of stipends to graduate students. A technical training grant program, to be initiated in fiscal year 1968, will provide support for increasing the subprofessional manpower required for water pollution control activities. Such necessary personnel as skilled engineering aides, scientific technicians, and treatment plant operators will be trained through this program. Technical training grants will be awarded to technical schools, junior colleges and similar institutions.

Demonstration grants are awarded to public and private institutions and agencies to support investigations and studies of an applied nature and to demonstrate the feasibility of new methods.

Research fellowships are awarded to individuals for support of specialized research training in the institution of their choice. The purpose is to increase the number of scientists qualified to carry on independent research in water supply and pollution control.

Additional information on this program may be obtained from the Office of Research and Development, Division of Grants Management, Federal Water Pollution Control Administration, 633 Indiana Avenue, N.W., Washington, D. C. 20242.

DIRECT OPERATIONS

The Federal Water Pollution Control Act, as amended, authorizes a broad attack upon the Nation's pollution problems. In addition to its grant programs, the Federal Water Pollution Control Administration is actively engaged in a number of in-house programs to control and abate pollution. These include research; regulatory actions to enforce pollution abatement on interstate and navigable waters; technical assistance to States, local governments, industries and others to help them solve difficult pollution problems; training; and water resources planning.

The in-house program, combined with grant activities, provides a comprehensive set of tools for coping with the Nation's pollution problems. The following sections describe the in-house programs.

Research and Development

In-house research is conducted by the Administration to develop improved technology for water pollution control. While a great deal of progress can be made using existing technology, the need for new technology becomes strikingly evident when the amount and complexity of wastes produced by modern industrial establishments, the difficult problems posed by agricultural run-off or acid mine drainage, or those concerned with removing extremely troublesome nutrients found in the effluent of even efficiently operated waste treatment plants are carefully evaluated. When the number and variety of wastes entering streams are related to the ever-increasing demands for clean water, the need for finding new ways of dealing with this problem become evident.

Increased demands on water resources as opposed to increases in the amount and complexity of wastes calls for developing technology to permit more and more water reuse. That technology is being actively pursued by the Administration through its program of advanced waste treatment research.

This program, now at the pilot plant stage, may quite likely lead to techniques that permit the direct, deliberate reuse of waste water. It is possible right now to produce water that is better in many cases than that which comes from the taps in a large number of American cities. Success in this program would increase available water supplies and abate the widespread health, economic, and aesthetic damages caused by water pollution.

Pilot plants are operating or under construction at a number of locations, including Lebanon, Ohio; Pomona and Lancaster, California; Washington, D. C.; and Manassas, Virginia. Such plants are only the beginning of the new era of research and development in water pollution control.

In the past, most in-house research in water pollution was conducted at the Robert A. Taft Sanitary Engineering Center in Cincinnati, Ohio. The establishment and operation of the field and research laboratories by the 1961 Water Pollution Control Act and subsequent legislation permitted research to be conducted at several locations throughout the Nation. Information on these laboratories is provided under "Field and Research Laboratories."

Research, as well as other programs, is conducted under contract with public agencies, private groups, individuals, and institutions. Contract authority is contained in Sections 5 and 6 of the Water Pollution Control Act. This route is used when problems or development of methods can be handled more economically and efficiently than through other means. Work is conducted in laboratory investigations and pilot-scale research projects as well as in a variety of other pollution related work. Examples of contracts awarded are: Rand Development Corporation, Cleveland, Ohio--$300,000 for the design, construction, operation and evaluation of a rapid flow combustible filter for treatment of combined sewer overflow; Yule, Jordan and McNee, Philadelphia, Pennsylvania--$209,138 for design and development of a 3.5 million gallon per day sewage treatment plant using a coal treatment process; Neptune Microfloc, and Company, Corvallis, Oregon--$75,000 for a fully operable nutrient removal pilot plant.

Information on contracts is available from the Procurement Officer, Federal Water Pollution Control Administration, 633 Indiana Avenue, NW., Washington, D. C. 20242.

Technical Assistance

States, local authorities, and industry, on request through the State water pollution control agencies and the appropriate Regional Offices of the Federal Water Pollution Control Administration, may obtain expert scientific and engineering assistance to help solve specific water pollution problems. This assistance ranges from simple responses to letter requests for information to project investigations requiring several years.

Particular problems on which technical assistance has been provided are: determination of ways to protect fish and wildlife from the effects of pollution in the Klamath River Basin (California-Oregon); control of acid mine drainage in Appalachia and other areas; and control of irrigation and industrial waste pollutants that affect San Francisco Bay. Of particular significance is the Administration's assistance to States in developing water quality standards as required by the Water Quality Act of 1965. The standards program is described under "Water Quality Standards."

Comprehensive Water Pollution Control Projects

The Clean Water Restoration Act of 1966 and subsequent efforts by the Administration have emphasized the use of this program to achieve systematic cleanup of entire river basins. This new approach includes extensive efforts to develop basin-wide pollution control action programs which can be implemented immediately, to provide technical guidance to basin planning agencies, and relate State-local planning efforts to Federal planning. Assistance is provided to develop planning agencies, as authorized by the Clean Water Restoration Act of 1966. Grants for this purpose were described under "Grants for Comprehensive Basin Plans for Water Quality Control Abatement."

Specifically, the program involves (a) developing a comprehensive guide to pollution control actions necessary in each major river basin, in terms of immediate cleanup needs and long-range preventive measures; (b) participating in Federal interagency water resources planning; (c) guiding, assisting, and encouraging activities of State-local basin planning agencies; and (d) advising Federal construction agencies on the value of and need for storage for water quality control in Federal reservoirs.

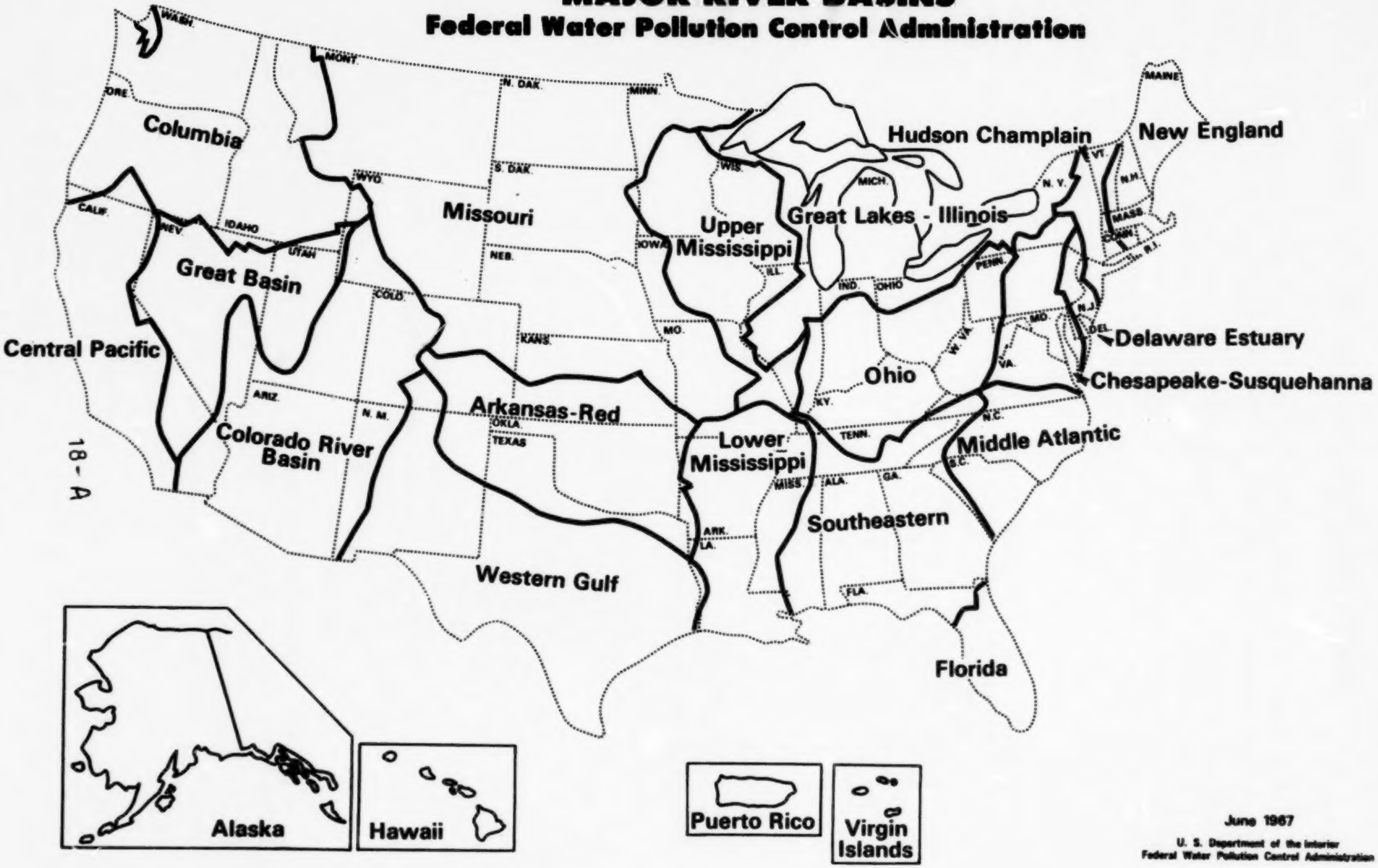
The Administration's comprehensive projects will continue to provide the solid basis for technical planning for water pollution control on a basin-wide basis. For purposes of establishing comprehensive projects, the Nation has been divided into 20 major river basins. In 1967, Administration projects were underway in 13 of these basins. These projects cover the following river basins:

Arkansas-Red River
Chesapeake-Susquehanna
Columbia
Great Lakes-Illinois River
Delaware Estuary
Ohio
Southeastern
Hudson-Champlain
Central Pacific
Missouri-Souris, Red River of the North
Lower Mississippi
Upper Mississippi
New England

Figure 1 shows the location of these basins. These projects are emphasizing basin-wide pollution control action programs which can be implemented immediately through the use of Federal Water Pollution Control Administration grant funds and authority, and which can also serve for review of water quality standards for interstate waters.

Figure 1

Comprehensive Programs
MAJOR RIVER BASINS
Federal Water Pollution Control Administration



June 1967
U. S. Department of the Interior
Federal Water Pollution Control Administration

Pollution Surveillance

Under this program, water quality data and related water pollution information are collected, evaluated and disseminated. The program will take on added importance when compliance with the standards established under authority of the Water Quality Act of 1965 is evaluated on interstate streams.

Data are provided to State, interstate, and Federal agencies through a storage and retrieval system (STORET) that is based on a flexible program of water quality monitoring stations located throughout the Nation. Systems for data retrieval and storage are also operated to support Federal Water Pollution Control Administration comprehensive programs, enforcement studies, and special projects.

To insure accuracy and precision in the collection of all stream quality data, an analytical quality control program has been initiated. Selection and publication of methods is underway.

Training

This program supports training of qualified personnel in specialized disciplines related to water pollution control. A large number of short technical training courses has been directed from the Sanitary Engineering Center in Cincinnati, but training programs are also being conducted at the field laboratories.

Advanced training is supported for skilled personnel to improve and expand their capabilities in the diverse and complex programs of water supply and pollution control. Efforts are also being made to improve and accelerate the flow of information, gained from research and technical improvements, to practicing engineers and scientists.

During fiscal year 1967, approximately 300 persons are expected to participate in in-service training courses conducted at the Sanitary Engineering Center and the newly established field laboratories. Examples of the 13 courses being given at the Center are: Interference Organisms in Water Supplies, Bioxidation of Industrial Wastes, and Laboratory Analysis for Waste Water Treatment Operators. The Federal Water Pollution Control Administration training centers are:

Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio
Robert S. Kerr Water Research Center, Ada, Oklahoma
Southeast Water Laboratory, Athens, Georgia
Pacific Northwest Water Laboratory, Corvallis, Oregon
Alaska Water Laboratory, College, Alaska
In addition to the above, courses are also offered at
    Metuchen, New Jersey

Selected employees are assisted in specialized study at the graduate level. For fiscal year 1967, arrangements were made to support 20 engineers and scientists in 11 universities. Advanced training is being sought in organic chemistry, aquatic virology, and water resources planning. In addition to the training conducted under this program, support is given to educational institutions to develop programs for students entering professional positions related to water pollution control. This support is provided under the Research and Training Grants program described under "Research, Training, Demonstration, and Research Fellowship Grants."

A manpower and training report required by the Clean Water Restoration Act of 1966 has been prepared and is to be published soon. The report is concerned with national manpower needs in water pollution control, reviews Federal training efforts, describes current approaches to the problem, and identifies areas needing corrective action. It generally recommends a broad scale and intensive effort.

Public Information

The public information program presents the facts about water pollution and water pollution control to the American people generally and to interested groups and organizations in particular. It serves the public's right to know what the Administration is doing and trying to do, and it also serves those who need particular kinds of information in order to participate effectively in water pollution control programs.

These objectives are carried out in a variety of ways. They include: planning, production, and distribution of publications; reporting day to day actions of the Administration and major program and policy developments through press releases and other means; responding to a continuous flow of requests for information from the press and other communications media; initiating and arranging for the production of films, exhibits, and other special projects to achieve specific information objectives; and participating in cooperative information projects with other Government agencies and with outside groups and organizations.

Field and Research Laboratories

The Federal Water Pollution Control Administration currently has six major laboratories engaged in a wide variety of pollution control activities. A number of other laboratories are in various stages of planning and design to provide the necessary national coverage. A list of the Federal Water Pollution Control Administration laboratories, the name of the laboratory director, and the laboratory address are given under "Regional Offices, Laboratories, and Field Project Addresses."

The most well-known of the laboratories is the Robert A. Taft Sanitary Engineering Center at 4676 Columbia Parkway in Cincinnati, Ohio. This laboratory has been in existence since 1953 and is engaged in a large and diverse number of activities. The Taft Center is the focal point for programs carried out at two other locations in Cincinnati. Activities conducted in this complex include research, training, technical assistance and pollution surveillance, all described briefly in previous sections.

At 5555 Ridge Avenue, Cincinnati, Ohio, a staff of scientists and engineers of the Division of Technical Services, Technical Advisory and Investigations Branch provides services to the Administration's programs as well as to other agencies, States, municipalities and industries. This group is concerned with providing technical assistance and backup for enforcement actions. A Pollution Surveillance Laboratory and office at 1014 Broadway provides direction and support for the national surveillance program. It conducts water sample analyses, provides analytical services, operates water quality instruments, and develops analytical quality control procedures.

The Water Pollution Control Amendments of 1961 and subsequent legislation authorized the Secretary to establish, equip, and maintain field laboratory and research facilities for conducting research, investigations, experiments, field demonstrations and studies, and training related to the prevention of water pollution.

Four such laboratories have been completed. The Alaska Water Laboratory at College, Alaska, opened and dedicated in December 1965, serves the particular needs of Arctic conditions; the Southeast Water Laboratory, Athens, Georgia, and the Robert S. Kerr Water Research Center at Ada, Oklahoma, were dedicated in May 1966. The Pacific Northwest Water Laboratory at Corvallis, Oregon, opened in October 1966.

The National Water Quality Laboratory at Duluth, Minnesota, went into full operation in July 1967. This laboratory will be largely concerned with research into water quality requirements for fresh water uses.

Enforcement Program

This program (1) conducts enforcement proceedings; and (2) encourages interstate cooperation, the enactment of improved and uniform state water pollution control laws, and the formulation of interstate compacts for the prevention and control of water pollution.

The procedures to be followed in the Federal enforcement process are specifically spelled out by the Federal Water Pollution Control Act, as amended: (1) a conference; (2) a public hearing; and (3) court action. Initiation of the enforcement process in situations of interstate pollution, where pollution emanating from sources in one State endangers the health or welfare of persons in another State, is mandatory upon the request of a State Governor, or an official State water pollution control agency, or a municipality in whose request the Governor and State agency concur. It is similarly mandatory in intrastate pollution situations upon the request of the Governor of the State concerned, when the effect of such pollution on the legitimate uses of the waters is judged sufficient by the Secretary to warrant Federal action. The exercise of Federal jurisdiction to abate interstate pollution without State request is required when reports, surveys, or studies indicate that such pollution is occurring. The Secretary may also call an enforcement conference where pollution of interstate or navigable waters has damaged shellfish so that substantial economic injury has resulted from the inability to market shellfish products in interstate commerce. This includes the inability to market shellfish in interstate commerce where pollution occurs in intrastate waters.

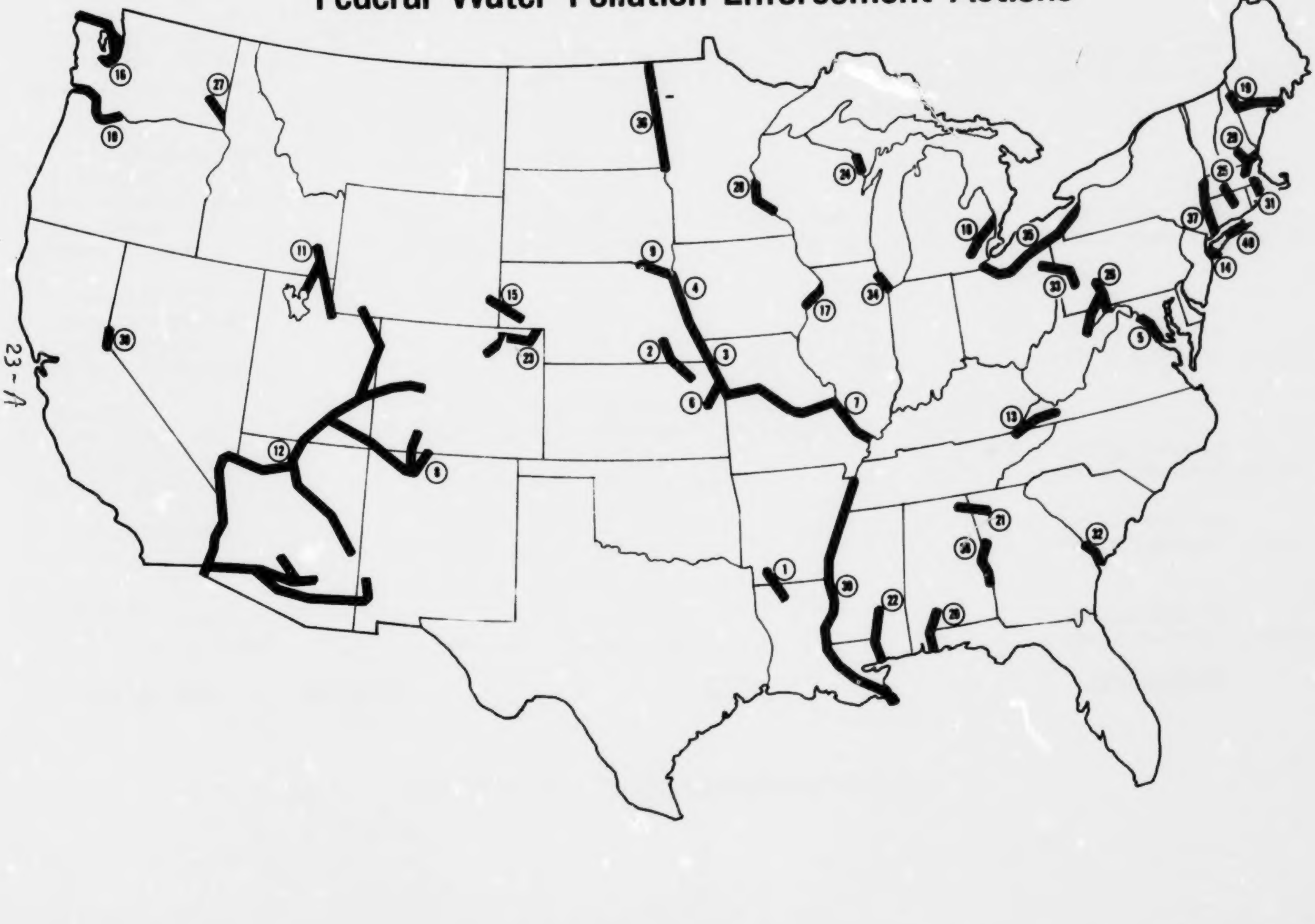
The steps in an enforcement action, very briefly, may involve:

1. Conference - held with representatives of each of the State water pollution control agencies and the Department.
2. Hearings - called when conference recommendations have not been complied with.
3. Court Action - a suit brought against polluters if abatement is not secured.

As of June 30, 1967, 42 enforcement actions have been scheduled or initiated, involving more than 40 States and the District of Columbia. A list of these actions has been provided on the following pages. A map showing the location of enforcement actions is included as Figure 2.

Figure 2

Federal Water Pollution Enforcement Actions



FEDERAL WATER POLLUTION ENFORCEMENT ACTIONS

ACTION AREA	MAP REFERENCE	DATES	INITIATED BY
Corney Creek Drainage System (Arkansas-Louisiana)	1	Hearing: January 16-17, 1957	Surgeon General, Public Health Service
Big Blue River (Nebraska-Kansas)	2	Conference: May 3, 1957	Surgeon General, Public Health Service
Missouri River-St. Joseph, Missouri Area (Missouri-Kansas)	3	Conference: June 11, 1957 Hearing: July 27-30, 1959 Suit Filed: September 29, 1960 Court Order: October 31, 1961	Surgeon General, Public Health Service
Missouri River-Omaha, Nebraska Area (Nebraska-Kansas-Iowa-Missouri)	4	Conference (1st Session): June 14, 1957 (2nd Session): July 21, 1964	Surgeon General, Public Health Service
Potomac River-Washington Metropolitan Area (District of Columbia-Maryland-Virginia)	5	Conference (1st Session): August 22, 1957 (2nd Session): February 13, 1958	Surgeon General, Public Health Service
Missouri River-Kansas Cities Metropolitan Area (Missouri-Kansas)	6	Conference: December 3, 1957 Hearing: June 13-17, 1960	Surgeon General, Public Health Service
Mississippi River-St. Louis Metropolitan Area (Missouri-Illinois)	7	Conference: March 4, 1958	Missouri Health Division; Illinois Sanitary Water Board; Bi-State Development Agency

ACTION AREA	MAP REFERENCE	DATES	INITIATED BY
Animas River (Colorado-New Mexico)	8	Conference (1st Session): April 29, 1958 (2nd Session): June 24, 1959	New Mexico Department of Public Health
Missouri River-Sioux City Area (South Dakota-Iowa-Nebraska)	9	Conference: July 24, 1958 Hearing: March 23-27, 1959	Iowa Commissioner of Public Health
Lower Columbia River (Washington-Oregon)	10	Conference (1st Session): September 10-11, 1958 (2nd Session): September 3-4, 1959	Surgeon General, Public Health Service
Bear River (Idaho-Utah-Wyoming)	11	Conference (1st Session): October 8, 1958 (2nd Session): July 19, 1960	Utah Water Pollution Control Board
Colorado River and all tributaries (Colorado-Utah-Arizona-Nevada-New Mexico-California-Wyoming)	12	Conference (1st Session): January 13, 1960 (2nd Session): May 11, 1961 (3rd Session): May 9-10, 1962 (4th Session): May 27-28, 1963 (5th Session): May 26, 1964	New Mexico Department of Public Health; Arizona State Department of Health; Nevada State Board of Health; Colorado Department of Public Health; Utah Water Pollution Control Board; California State Water Pollution Control Board
North Fork of the Holston River (Virginia-Tennessee)	13	Conference (1st Session): September 28, 1960 (2nd Session): June 19, 1962	Tennessee Stream Pollution Control Board
Raritan Bay (New Jersey-New York)	14	Conference (1st Session): August 22, 1961 (2nd Session): May 9, 1963 (3rd Session): June 13-14, 1967	Surgeon General, Public Health Service

ACTION AREA	MAP REFERENCE	DATES	INITIATED BY
North Platte River (Wyoming-Nebraska)	15	Conference (1st Session): September 12, 1961 (2nd Session): March 21, 1962 (3rd Session): November 20, 1963	Nebraska Department of Health
Puget Sound (Washington)	16	Conference: January 16-17, 1962	Governor of Washington
Mississippi River-Clinton, Iowa Area (Illinois-Iowa)	17	Conference: March 8, 1962	Secretary of Health, Education and Welfare
Detroit River (Michigan)	18	Conference (1st Session): March 27, 1962 (2nd Session): June 15-18, 1965	Governor of Michigan
Androscoggin River (New Hampshire-Maine)	19	Conference: September 24, 1962 February 5, 1963	Secretary of Health, Education and Welfare
Escambia River (Alabama-Florida)	20	Conference: October 24, 1962	Florida State Board of Health
Coosa River (Georgia-Alabama)	21	Conference: August 27, 1963	Secretary of Health, Education and Welfare
Pearl River (Mississippi-Louisiana)	22	Conference: October 22, 1963	Secretary of Health, Education and Welfare
South Platte River (Colorado)	23	Conference (1st Session): October 29, 1963 (2nd Session): April 27-28, 1966	Governor of Colorado
Menominee River (Michigan-Wisconsin)	24	Conference: November 6, 1963	Secretary of Health, Education and Welfare

ACTION AREA	MAP REFERENCE	DATES	INITIATED BY
Lower Connecticut River (Massachusetts-Connecticut)	25	Conference: December 2, 1963	Secretary of Health, Education and Welfare
Monongahela River (Maryland-West Virginia-Pennsylvania)	26	Conference: December 17-18, 1963	Secretary of Health, Education and Welfare
Snake River-Lewiston, Idaho-Clarkston, Washington Area (Idaho-Washington)	27	Conference: January 15, 1964	Secretary of Health, Education and Welfare
Upper Mississippi River (Minnesota-Wisconsin)	28	Conference (1st Session): February 7-8, 1964 (2nd Session): February 28, 1967	Secretary of Health, Education and Welfare; Governors of Minnesota and Wisconsin
Merrimack-Nashua Rivers (New Hampshire-Massachusetts)	29	Conference: February 11, 1964	Secretary of Health, Education and Welfare; Governor of Massachusetts
Lower Mississippi River (Arkansas-Tennessee-Mississippi-Louisiana)	30	Conference: May 5-6, 1964	Secretary of Health, Education and Welfare
Blackstone and Ten Mile Rivers (Massachusetts-Rhode Island)	31	Conference: January 26, 1965	Secretary of Health, Education and Welfare
Lower Savannah River (South Carolina-Georgia)	32	Conference: February 2, 1965	Secretary of Health, Education and Welfare

ACTION AREA	MAP REFERENCE	DATES	INITIATED BY
Mahoning River (Ohio-Pennsylvania)	33	Conference: February 16-17, 1965	Secretary of Health, Education and Welfare
Grand Calumet River, Little Calumet River, Calumet River, Wolf Lake, Lake Michigan, and their Tributaries (Illinois-Indiana)	34	Conference: March 2-9, 1965	Secretary of Health, Education and Welfare
Lake Erie (Michigan-Indiana-Ohio-Pennsylvania-New York)	35	Conference (1st Session): August 3-5, 1965 (2nd Session): August 10-11, 1965 (3rd Session): March 22, 1967	Secretary of Health, Education and Welfare; Governor of Ohio
Red River of the North (North Dakota-Minnesota)	36	Conference: September 14-15, 1965	Secretary of Health, Education and Welfare
Hudson River (New York-New Jersey)	37	Conference: September 28-30, 1965	Secretary of Health, Education and Welfare; Governors of New York and New Jersey
Chattachoochee River (Georgia-Alabama)	38	Conference: July 14-15, 1966	Secretary of Interior
Lake Tahoe (California-Nevada)	39	Conference: July 18-20, 1966	Secretary of Interior

ACTION AREA	MAP REFERENCE	DATES	INITIATED BY
Moriches Bay and the Eastern Section of the Great South Bay, and their Tributaries (Long Island-New York)	40	Conference (1st Session): September 20-21, 1966 (2nd Session): June 21, 1967	Secretary of Interior
Penobscot River and Upper Penobscot Bay and their Tributaries (Maine)	41	Conference: April 20, 1967	Secretary of Interior
Eastern New Jersey Shore - from Shark River to Cape May (New Jersey)	42	Conference scheduled for Fall 1967	Secretary of Interior

The Water Quality Act of 1965 changed the whole nature of the enforcement program. Under that law, the Secretary of the Interior is empowered to act to abate pollution where water quality in interstate waters or portions thereof is not in compliance with the standards established under the Water Quality Act of 1965. That is, once the States have adopted water quality standards and the Secretary has found them acceptable as Federal standards, a violation of the standards is subject to enforcement action. States have the initial responsibility for taking action if standards are violated. If States do not act, the United States Attorney General, at the request of the Secretary of the Interior, may initiate an enforcement action. One hundred and eighty days before initiating a court action, the Secretary of the Interior must notify the alleged water quality standards violators, as well as other interested parties, such as State agencies, of the violation of the standards. The purpose of this period is to allow time to secure voluntary compliance by the polluters.

The end result of this provision is to provide, for the first time throughout the country, a specified set of conditions to adhere to and look for in enhancing and protecting water quality.

Water Quality Standards

The Water Quality Act of 1965 provided for the single, most forceful program yet devised to protect and enhance the quality of the Nation's waters. Under this law, the States had until June 30, 1967, to adopt water quality criteria for their interstate and coastal waters and a plan for implementing and enforcing the criteria adopted. Criteria and plans acceptable to the Secretary become the water quality standards applicable to the State's interstate and coastal waters.

In the event any State standards are unacceptable, the Secretary of the Interior has the authority to establish standards, but only after States and all other affected interests have had a full opportunity to be heard. Once adopted, standards are enforceable by the States and the Federal Government if any discharge of matter occurs which reduces the quality of the water below the established standards.

The standards make it possible for municipalities, industries, and other water users to know in advance what their responsibilities are for keeping clean waters clean, and for restoring polluted waters to a reasonable degree of purity. The standards also give the Federal Government authority to prevent pollution before it occurs, instead of instituting enforcement action after health and welfare are proven to be endangered.

The standards are not intended to "lock in" present uses of water, nor to exclude uses not now possible. Nor are they intended to be least common denominators of water quality and use. Instead, they are intended to enhance the quality and productivity of the Nation's water resources in an orderly, programmed manner.

Standards prepared by the States have now been submitted and are being reviewed by the Administration prior to submitting them to the Secretary. The standards-setting effort is the Federal Water Pollution Control Administration's top priority program.

When standards are reviewed, the respective types of water uses determined to be desirable are evaluated against the water quality criteria prescribed to achieve those uses. Close attention is also paid in this review to plans prepared for implementing the standards and to surveillance programs developed for assessing effectiveness of the proposed program.

To assist States in delineating factors to be considered in reviewing standards, the Federal Water Pollution Control Administration prepared and widely distributed "Guidelines for Establishing Water Quality Standards for Interstate Waters" and "Necessary Supporting Material and Implementation Plan Contents." To assist him in evaluating State submissions, the Secretary of the Interior appointed a variety of experts to five National Technical Advisory Committees, with the request they prepare water quality criteria for water uses in the area of their competence. Committees were established to develop criteria in the following areas: fish, other aquatic life and wildlife, municipal water supplies, industrial water supplies, agriculture, and recreation and aesthetics. An interim but comprehensive report has been completed and is available in limited quantities. Committees are continuing their work.

Standards submitted for review have generally been of a high caliber and represent a substantial Federal-State-local cooperative effort. The standards-setting process has resulted in actions not visible on the horizon even six months ago. Specific programs with a definite schedule have been prepared for cleaning up rivers, lakes, streams and coastal waters; State laws to permit compliance with the Water Quality Act have been revised where necessary; and information previously unavailable or in an unassembled form has been developed and collected in a single set of documents available to all groups with an interest in preserving and protecting water quality. Most important, however, is the spirit aroused in the preparation of these blue prints for clean water. Officials at all levels have been surprised at the interest expressed by citizen groups and have themselves become actively involved in assuring the program's success. The whole process has turned out as an excellent example of people and government working democratically together to achieve a common purpose.

It is anticipated that the majority of standards will be accepted or rejected by the fall of 1967.

Significant as they are, standards are basically a guide for obtaining the longer range objective of improving and protecting water quality. Standards run through the clean-up program, holding together and guiding efforts in planning, waste treatment works construction, research, enforcement, pollution surveillance, training and technical assistance.

Additional information on this program may be obtained from the Water Quality Standards Staff, Office of Program Plans and Development, Federal Water Pollution Control Administration, 633 Indiana Avenue, NW., Washington, D. C. 20242.

Control of Pollution from Federal Installations

Federal responsibility for pollution control does not begin or end with requiring others to act. Government installations scattered throughout the Nation and located in almost every city also have a responsibility in controlling pollution themselves. Recognizing this, the President issued Executive Order 11288, dated July 2, 1966, to ensure that the Federal Government provides leadership in preventing and abating water pollution in the United States by controlling pollution from all of its installations and activities.

This order has a far-reaching impact since it involves a diversity of installations, such as military bases, hospitals, national parks, forests, Federal dams, and post offices. Recipients of Federal grants, loans, and contracts are also to subscribe to the order, as provided by Section 7. The Federal Water Pollution Control Administration, through a program of review, approval, and technical assistance, cooperates with the other Federal agencies in developing water pollution control plans for Federal installations.

The Federal installation program prepares reports for the heads of Federal departments, agencies and other establishments to advise them of the potential impact of their projects or programs on water quality. Recommendations concerning any changes or other measures with respect to the design, construction and operation of projects are made. A copy of the Executive Order is included in the appendix.

/ Additional information on this program may be obtained from the Division of Federal Activities Coordination, Office of Facilities Programs, Federal Water Pollution Control Administration, 633 Indiana Avenue, NW., Washington, D. C. 20242.

Oil Pollution

Responsibility for administering the Oil Pollution Act of 1924 was transferred from the Secretary of the Army to the Secretary of the Interior by the Clean Water Restoration Act of 1966. This legislation authorizes the Secretary of the Interior, with the consent of the Commandant of the Coast Guard and the Secretary of the Army, to make use of Coast Guard or Army personnel, equipment, organization, and agencies in administering the Act, and of Army Corps of Engineers, Customs, and Coast Guard personnel in its enforcement, as well as using persons under his own jurisdiction. Persons discharging or permitting discharge of oil are required to remove it from the navigable waters and adjoining shorelines immediately, or pay the costs of its removal by the Secretary.

The whole question of preventing and controlling damage caused by oil pollution was dramatically raised by recent oil spills off the English coast and by oil releases along the northeastern coast of the United States. Damage to marine life and recreation were incalculable and the cost of attempts to save beaches and wildlife ran into millions of dollars. These disasters highlighted our technical inability to cope with such problems and the inapplicability of the Oil Pollution Act of 1924 to handle such problems since the Act applies only to discharges which are grossly negligent or which result from willful spilling, leaking, pumping, pouring or emitting of oil. The Act also does not apply to spills from fixed installations such as pipelines, oil deposits, refineries, or manufacturing plants using and storing large quantities of oil. While tankers of even greater capacity than the Torrey Canyon are being constructed, the Nation is presently ill-equipped to handle disasters of the type that occurred with that super-carrier.

In order to combat this type of pollution and prevent such catastrophes, the President, on May 26, 1967, requested the Secretary of the Interior and the Secretary of Transportation to under take a study to determine how best to mobilize the resources of the Federal Government and the Nation to meet the problem and to prepare a report with recommendations for an effective program. The report is to be made within 90 days of the request. The study is to include a review of existing resources to deal with the problem, legal concerns, research and development needed, and recommendations as to where responsibility for the program should be lodged.

The Department of the Interior has taken a strong position on the oil pollution problem. Generally, the Department recommends the present authorities be strengthened to provide more effective enforcement; vessel owners be required to remove discharged oil or pay clean-up costs; the Secretary be permitted to remove discharged oil when the discharger fails to act; and an emergency clean-up fund be established.

A copy of the Oil Pollution Act of 1924, as amended, is included in the appendix.

Additional information on this subject may be obtained from the Office of Technical Programs, Federal Water Pollution Control Administration, 633 Indiana Avenue, N.W., Washington, D. C. 20242.

SPECIAL STUDIES

The Clean Water Restoration Act of 1966 authorized several special studies in recognition of the lack of information on certain water pollution control problems. These studies are briefly described below.

Estuarial Pollution Study

Estuaries of the Nation have become natural depositories for the wastes discharged into the Nation's coastal rivers. The Secretary of the Interior was directed to undertake a comprehensive study of the effects of pollution on beneficial water uses in the estuaries and estuarine zones of the United States. The study will consider the effect of demographic trends, mineral resource and fossil fuel exploitation, navigation, flood control, erosion control, and other activities on the quality of estuarial waters. It will be conducted in cooperation with the Secretary of the Army, the Secretary of Agriculture, the Water Resources Council, and other appropriate Federal, State, interstate, or local public bodies and private organizations, institutions, and individuals.

A report is to be submitted to the Congress before the end of 1969. It is to include, among other matters, an analysis of the economic and social importance of estuaries and the effects of pollution on their use and enjoyment; a discussion of the major economic, social, and ecological trends occurring in estuarine zones; and recommendations for a comprehensive national program to preserve, study, and develop the Nation's estuaries. The report will delineate the responsibilities of Federal, State, and local governments and public and private interests.

Further information on this study may be obtained from the Office of Estuarial Studies, Office of Technical Programs, Federal Water Pollution Control Administration, 633 Indiana Avenue, NW., Washington, D. C. 20242.

Manpower Evaluation

The Clean Water Restoration Act also authorized a study to determine the need for additional trained State and local personnel to carry out programs assisted by the Federal Water Pollution Control Act, and the means of using existing Federal training programs to train such personnel. The results were made available to the President and the Congress in July 1967.

This study has been completed, and a report entitled, Manpower and Training Needs in Water Pollution Control has been submitted to the Congress. The report sets forth an action program for meeting needs, drawing upon a variety of approaches to meet the demand for skilled personnel.

Copies may be obtained from the Office of Technical Programs, Federal Water Pollution Control Administration, 633 Indiana Avenue, NW., Washington, D. C. 20242.

Cost Estimate and Study

The cost of water pollution to the Nation has never been assessed adequately. Similarly, too little is known of the expenditures required to control pollution, both now and in the future. The Clean Water Restoration Act of 1966 authorized a cost estimate study of pollution control, to get a clearer idea of the magnitude of the effect which will be required, as well as the adequacy of present programs for coping with the problem. In this study, the Secretary was directed to include the following: a detailed estimate of the cost of carrying out the provisions of the Federal Water Pollution Control Act; a comprehensive study of the economic impact on affected governmental units of the cost of treatment facilities installation; a comprehensive analysis of the national requirements for, and cost of treating municipal, industrial, and other effluent to attain water quality standards. The estimate and study are to be submitted to the Congress by January 10, 1968, and updated each year thereafter.

Additional information on this study may be obtained from the Office of Program Plans and Development, Federal Water Pollution Control Administration, 633 Indiana Avenue, NW., Washington, D. C. 20242.

Watercraft Pollution Study

The Secretary, in consultation with various government departments, made a complete investigation and study of the extent of pollution of all navigable waters from litter and sewage discharged by watercraft, and of the methods of abating such pollution. A report has been submitted to the Congress, with recommendations for a legislative program to control vessel pollution.

Copies of the report may be obtained from the Office of Technical Programs, Federal Water Pollution Control Administration, 633 Indiana Avenue, NW., Washington, D. C. 20242.

Industrial Incentives Study

The Secretary is to conduct a complete study of methods for providing incentives to assist in the construction of water pollution control facilities by industry. The study is to include, but not be limited to, possible use of tax incentives as well as other financial assistance. The Secretary of the Interior is to consult with the Secretary of the Treasury and other appropriate Federal officers and report results to the Congress, with recommendations, by January 30, 1968.

Additional information on this subject may be obtained from the Office of Program Plans and Development, Federal Water Pollution Control Administration, 633 Indiana Avenue, NW., Washington, D. C. 20242.

THE PRESIDENT'S WATER POLLUTION CONTROL ADVISORY BOARD

The Federal Water Pollution Control Act of 1956 established a nine-member Water Pollution Control Advisory Board, chaired by the Secretary or his designee. Members are appointed by the President and serve three-year terms. The Commissioner of the Federal Water Pollution Control Administration, Department of the Interior, is currently serving as Chairman.

The mission given to the Board by law is to "advise, consult with, and make recommendations to the Secretary on matters of policy relating to the activities and functions of the Secretary under this Act." Under this authority, the Board regularly examines all phases of the water pollution problem and from time to time holds public meetings to hear the views of citizens, government, and private agencies. A list of the Board members, affiliation, and expiration date of their term of office follows.

Chairman, Ex Officio

Hon. James M. Quigley
Commissioner, Federal Water
Pollution Control Administration
Department of the Interior
Washington, D. C. 20242

Hon. John W. Gardner
Secretary of Health, Education,
and Welfare
Washington, D. C. 20201

Mr. Edward P. Morgan ('70)
News Commentator
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Vice President
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New Orleans, Louisiana

Executive Secretary

Mr. Ben J. Gryctko
Federal Water Pollution Control
Administration
Department of the Interior
Washington, D. C. 20242

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Chief Engineer & General Manager
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Los Angeles, California 90057

Mr. Robert W. Patterson ('68)
Architect and Landscape Architect
Bar Harbor, Maine 04609

Mr. Stephen E. Reynolds ('70)
State Engineer and Secretary
Interstate Stream Commission
State Engineer's Office
State Capitol
Santa Fe, New Mexico 87501

Mrs. Haskell Rosenblum ('69)
League of Women Voters
of the United States
6686 - 32nd Street, N. W.
Washington, D. C. 20015

Mr. Ed Munro ('69)
Commissioner, King County
402 King County Court House
Seattle, Washington, 98104

Mr. Everett F. Zurn ('68)
Chairman, Zurn Industries, Inc.
1801 Pittsburgh Avenue
Erie, Pennsylvania 16512

Terms expire on June 30 of the year in parentheses.

Additional information may be obtained from the Executive Secretary, Water Pollution Control Advisory Board, Federal Water Pollution Control Administration, 633 Indiana Avenue, N. W., Washington, D. C. 20242.

ADDITIONAL INFORMATION

General inquiries concerning the Federal Water Pollution Control Administration's program should be directed to the Office of Program Plans and Development, Federal Water Pollution Control Administration, 633 Indiana Avenue, N. W., Washington, D. C. 20242.

ORGANIZATION OF THE FEDERAL WATER POLLUTION CONTROL ADMINISTRATION

The Federal Water Pollution Control Administration has been a part of the Department of the Interior since May 10, 1966, when it was transferred from the Department of Health, Education, and Welfare by Reorganization Plan Number 2. The following information gives a clearer understanding of the Administration's organization and functions, both at the Headquarters and field levels. An organization chart for Headquarters and a list of the names and addresses of the principal Headquarters personnel follows the description. The same is provided for field offices.

STRUCTURE AND STAFF FUNCTIONS - HEADQUARTERS

Headquarters Organization. The Headquarters office in Washington consists of the Office of the Commissioner and seven Assistant Commissioners.

Office of the Commissioner - Commissioner is responsible for overall direction and supervision of activities and functions of the Administration.

Deputy Commissioner - shares with the Commissioner final responsibility of the Administration in the performance of its functions.

Assistant Commissioner for Program Plans and Development - coordinates and evaluates development and accomplishments of plans, programs, and budgets in terms of goals and objectives; provides the Administration's coordination on the development of water pollution standards.

Legislative Liaison Officer - coordinates preparation, review, and transmission of legislative matters within the Administration; is Administration Liaison with the Division of Legislation, Office of the Solicitor, Department of the Interior.

Director, Office of Public Information - advises on information policy and procedure with respect to all media; explains Administration's programs and policies to press and public.

Chief Economist - counsels on economic implications of Federal Water Pollution Control Administration activities and programs and interpretation of public events in relation to these activities and programs; provides advice and guidance in formulating decisions and in developing proposed legislation; directs a nationwide program of analysis of economic factors pertinent to the field of water pollution control.

Manpower and Training Officer - investigates and coordinates manpower and training requirements to assure availability of personnel for a nation-wide pollution control program; develops and coordinates plans to assure availability of necessary scientific and technical manpower; administers training program; cooperates with States and Federal agencies in developing mutually beneficial programs; evaluates the effectiveness of training grants and research fellowship programs.

Assistant Commissioner for Administration - supervises and coordinates administrative activities, including personnel management, financial management, facilities management, general services and management systems.

Division of Personnel Management - principal staff and service office for matters relating to position classification, employment, training, wage administration, collective bargaining, employee-management relations, and safety program policy.

Division of Financial Management - principal staff and service office for matters relating to Administration financial management and policy, and grant administration.

Division of General Services - principal staff and service office for procurement, property management, records management, communications, duplicating, photography, library, and travel services.

Division of Facilities Management - principal staff office for plant management, facilities security, and architectural service, repairs and improvements.

Division of Management Systems - principal staff office for assistance in development, coordination, and evaluation of management systems, organization, procedures, and public regulations.

Assistant Commissioner for Comprehensive Planning and Programs - supervises planning, direction, and coordination of programs and activities and development of policies and procedures of the following:

Division of Area Operations - plans, directs, and coordinates the development of comprehensive water pollution control programs and related projects for the prevention, abatement and control of pollution of surface and underground water.

Division of Technical Control - coordinates the planning, conduct, and evaluation of pollution control programs and the development of technology.

Division of Planning Grants - administers a program of grants to planning agencies for developing comprehensive water quality control and abatement plans for river basins.

Assistant Commissioner for Facilities Programs - supervises the planning, direction, and coordination of activities, and development of policies, standards, and procedures of the following:

Division of Construction Grants - administers a program of grants to States and municipalities, and to intermunicipal and interstate agencies for the construction of waste treatment works.

Division of Federal Activities Coordination - administers programs for controlling, preventing, and abating water pollution by Federal activities, including related facilities and operations supported by Federal loans, grants or contracts; prepares reports on potential impact of Federal agency water resource development projects on water quality.

Assistant Commissioner for Technical Programs - supervises planning, direction and coordination of programs and activities, and the development of policies and procedures of the following:

Division of Technical Services - provides technical assistance on pollution problems and their solution to other units and, on request, to other Federal agencies, State and local agencies, industries and individuals. Plans and carries out special projects on solution of specific problems through use of current practices. Makes recommendations on need for and value of water storage in Federal reservoirs for water supply and quality control. Provides technical services in support of enforcement programs and actions, and the development of comprehensive water pollution control programs.

Division of Pollution Surveillance - plans, develops, and coordinates programs for the collection, evaluation and dissemination of water quality data and related water pollution information. Develops data systems to support comprehensive programs, enforcement studies, water quality standards compliance and special projects; supports development of automatic data collecting systems; plans quality control standards for data collection; conducts long-term water quality surveillance in support of operating programs.

Assistant Commissioner for Research and Development - directs and coordinates the development and implementation of the Administration's research and development programs, including program policies, standards, and procedures.

Division of Research - plans, coordinates, and directs research programs relating to the causes, control, and prevention of water pollution through in-house research, contracts and grants, investigations, experiments, and studies; and evaluates and monitors research performed under grants and contracts.

Division of Engineering Development - plans, coordinates, and directs the development and implementation of programs for the conduct of full-scale demonstrations and field evaluations of new or improved waste treatment or control processes and measures resulting from new knowledge developed through in-house research, contracts, and grants; and evaluates and monitors field evaluations and demonstrations performed under grants and contracts.

Division of Grants Management - provides support for and coordination of grants and contracts for research, demonstrations, training, and research fellowship programs including: follow-up on technical evaluation; administrative program, and executive approvals; and records and reports on progress in processing.

Assistant Commissioner for Enforcement - encourages and cooperates in support of State enforcement authorities; coordinates compliance with enforcement action recommendations and compliance with remedial action time schedules; and supervises operation of the following:

Division of Enforcement - prepares and coordinates preparation of enforcement actions resulting from violation of water quality standards adopted for interstate waters or to abate pollution which is endangering the health or welfare of persons.

Division of Interstate Compacts and Uniform State Laws - encourages cooperative activities by the States for the prevention and control of water pollution by encouraging the enactment of improved and uniform State pollution control legislation, and encouraging compacts between States for the prevention and control of water pollution.

June, 1967

ROSTER OF HEADQUARTERS OFFICIALS

FEDERAL WATER POLLUTION CONTROL ADMINISTRATION
633 Indiana Avenue, N. W.
Washington, D. C. 20242

AREA CODE 202
IDS 13
CML 96

		Room No.	Ext.
Commissioner	James M. Quigley	1100	34144
Deputy Commissioner	John T. Barnhill	1100	24871
Executive Secretary, WPC Advisory Board	Ben Gryctko	712	21122
Chief Economist	James J. Flannery	842	33730
Civil Rights & Equal Employment Opportunity Officer	Edgar Jenkins	714	34752
Congressional Liaison Officer	Mrs. Aleda Evans	703	37651
Director, Office of Public Information	Charles M. Rogers	812	21070
Office of Manpower & Training	(Vacant)		
Assistant Commissioner, Program Plans & Development	Allan Hirsch	1112	27873
Program Liaison Officer	Fred H. Hubbard	1109	23063
Director, Policy & Program Development	John R. Churchill	826	26821
Director, Program Review & Evaluation	Richard P. Nalesnik	800	34781
Director, Water Quality Standards	James L. Agee	838	36381
Assistant Commissioner, Technical Programs	Earl J. Anderson	1002	35681
Director, Div. of Technical Services	John M. Rademacher	1002	37701
Director, Div. of Pollution Surveillance	James H. McDermott	702	34642
Assistant Commissioner, Facilities Programs	(Vacant)		
Coordinator, Inter-governmental Water Programs	Charles F. MacGowan	802	27624
Director, Div. of Construction Grants	Thomas L. Ferry	Courts Bldg. 300	34646
Director, Div. of Federal Activities Coordination (Acting)	John P. Chase	1032	25500

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		Room No.	Ext.
Assistant Commissioner, Research & Development	Leon Weinberger	900	23600
Director, Div. of Research	David Stephan	900	36138
Director, Div. of Engineering Development	Allen Cywin	910	27308
Director, Div. of Grants Management	Harry A. Faber	920	21182
Assistant Commissioner, Enforcement	Murray Stein	1118	35512
Director, Div. of Enforcement (Acting)	Murray Stein	1118	35512
Director, Div. of Interstate Compacts & Uniform State Laws	Henry Stetina	1124	23120
Assistant Commissioner, Administration	Edmund J. Grant	1112	21591
Director, Div. of Personnel Management	Maxine C. Millard	318	33093
Director, Div. of Financial Management	Matthew C. Pilzys	1140	33626
Director, Div. of General Services (Acting)	Fred C. Windbeck	714	37856
Director, Div. of Facilities Management	Lawrence F. Gaffney	Tempo E 177	24207
Director, Div. of Management Systems	Everett L. McBride	Tempo E 7-105	37221
Assistant Commissioner, Comprehensive Planning & Programs	Reginald Price	708	21081
Director, Div. of Report Review & Coordination	Richard E. Hess	1012	27174
Director, Div. of Area Operations	Frank H. Rainwater	1012	23329
Director, Div. of Technical Control (Acting)	Frank H. Rainwater	1012	23329
Director, Div. of Planning Grants (Acting)	Joseph Amaral	704	21905

APPENDICES

Federal Water Pollution Control Act, as amended
  Reorganization Plan No. 2 of 1966
  Executive Order 11288
Oil Pollution Act, 1924

Interdepartmental Agreement, Concerning Consultation on Health Aspects of Water Pollution Control

Allocations of Grant-in-Aid Funds for Waste Treatment Construction
Allocations of Grant-in-Aid Funds for Water Pollution Control Programs for State and Interstate Agencies

Names and Addresses of State and Interstate Water Pollution Control Administrators

Selected List of Publications on Water and Water Pollution

Federal Grants for Clean Water

FEDERAL WATER POLLUTION CONTROL ACT, AS AMENDED

REORGANIZATION PLAN NO. 2 OF 1966

EXECUTIVE ORDER NO. 11288

OIL POLLUTION ACT, 1924

INTERDEPARTMENTAL AGREEMENT CONCERNING CONSULTATION ON HEALTH ASPECTS OF WATER POLLUTION CONTROL

Federal
WATER POLLUTION CONTROL ACT
Public Law 84-660

as amended by the Federal Water Pollution Control Act Amendments of 1961 — (PL 87-88), the Water Quality Act of 1965 — (PL 89-234), and the Clean Water Restoration Act of 1966 — (PL 89-753)

APPENDICES:

Reorganization Plan No. 2 of 1966
Executive Order 11288, Prevention, Control, and Abatement of Water Pollution by Federal Activities

OIL POLLUTION ACT, 1924

as amended by the Clean Water Restoration Act of 1966 — (PL 89-753)

March 3, 1849

U.S. DEPARTMENT OF THE INTERIOR

Federal Water Pollution Control Administration

FEDERAL WATER POLLUTION CONTROL ACT, AS AMENDED[1]

(33 U.S.C. 466 et seq.)

NOTE: Functions of the Secretary of Health, Education, and Welfare under this Act were transferred, effective May 10, 1966, to the Secretary of the Interior, pursuant to Reorganization Plan No. 2 of 1966. The reorganization plan excepted from the transfer certain functions related to public health aspects of water pollution. This print of the Act reflects the transfer of functions pursuant to the reorganization plan. See text of reorganization plan, Appendix A.

DECLARATION OF POLICY

Section 1. (a) The purpose of this Act is to enhance the quality and value of our water resources and to establish a national policy for the prevention, control, and abatement of water pollution.

(b) In connection with the exercise of jurisdiction over the waterways of the Nation and in consequence of the benefits resulting to the public health and welfare by the prevention and control of water pollution, it is hereby declared to be the policy of Congress to recognize, preserve, and protect the primary responsibilities and rights of the States in preventing and controlling water pollution, to support and aid technical research relating to the prevention and control of water pollution, and to provide Federal technical services and financial aid to State and interstate agencies and to municipalities in connection with the prevention and control of water pollution. The Secretary of the Interior (hereinafter in this Act called "Secretary") shall administer this Act through the Administration created by section 2 of this Act, and with the assistance of an Assistant Secretary of the Interior designated by him, shall supervise and direct the head of such Administration in administering this Act. Such Assistant Secretary shall perform such additional functions as the Secretary may prescribe.

(c) Nothing in this Act shall be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States.

FEDERAL WATER POLLUTION CONTROL ADMINISTRATION

Sec. 2. Effective ninety days after the date of enactment of this section[2] there is created within the Department of the Interior a Federal Water Pollution Control Administration (hereinafter in this Act referred to as the "Administration"). The head of the Administration shall be appointed, and his compensation fixed, by the Secretary. The head of the Administration may, in addition to regular staff of the Administration, which shall be initially provided from the personnel of the Department, obtain, from within the Department or otherwise as authorized by law, such professional, technical, and clerical assistance as may be necessary to discharge the Administration's functions and may for that purpose use funds available for carrying out such functions; and he may delegate any of his functions to, or otherwise authorize their performance by, an officer or employee of, or assigned or detailed to, the Administration.

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[1] Basic Act (PL84-660), approved 7/9/56, amended by the Federal Water Pollution Control Act Amendments of 1961 (PL87-88), approved 7/20/61, by the Water Quality Act of 1965 (PL89-234), approved 10/2/65, and by the Clean Water Restoration Act of 1966 (PL89-753), approved 11/3/66.

[2] This section added by section 2, PL89-234, approved 10/2/65.

COMPREHENSIVE PROGRAMS FOR WATER POLLUTION CONTROL

Sec. 3. (a) The Secretary shall, after careful investigation, and in cooperation with other Federal agencies, with State water pollution control agencies and interstate agencies, and with the municipalities and industries involved, prepare or develop comprehensive programs for eliminating or reducing the pollution of interstate waters and tributaries thereof and improving the sanitary condition of surface and underground waters. In the development of such comprehensive programs due regard shall be given to the improvements which are necessary to conserve such waters for public water supplies, propagation of fish and aquatic life and wildlife, recreational purposes, and agricultural, industrial, and other legitimate uses. For the purpose of this section, the Secretary is authorized to make joint investigations with any such agencies of the condition of any waters in any State or States, and of the discharges of any sewage, industrial wastes, or substance which may adversely affect such waters.

(b)(1) In the survey or planning of any reservoir by the Corps of Engineers, Bureau of Reclamation, or other Federal agency, consideration shall be given to inclusion of storage for regulation of streamflow for the purpose of water quality control, except that any such storage and water releases shall not be provided as a substitute for adequate treatment or other methods of controlling waste at the source.

(2) The need for and the value of storage for this purpose shall be determined by these agencies, with the advice of the Secretary, and his views on these matters shall be set forth in any report or presentation to the Congress proposing authorization or construction of any reservoir including such storage.

(3) The value of such storage shall be taken into account in determining the economic value of the entire project of which it is a part, and costs shall be allocated to the purpose of water quality control in a manner which will insure that all project purposes share equitably in the benefits of multiple-purpose construction.

(4) Costs of water quality control features incorporated in any Federal reservoir or other impoundment under the provisions of this Act shall be determined and the beneficiaries identified and if the benefits are widespread or national in scope, the costs of such features shall be nonreimbursable.

(c) [1]/(1) The Secretary shall, at the request of the Governor of a State, or a majority of the governors when more than one State is involved, make a grant to pay not to exceed 50 per centum of the administrative expenses of a planning agency for a period not to exceed 3 years, if such agency provides for adequate representation of appropriate State, interstate, local, or (when appropriate) international, interests in the basin or portion thereof involved and is capable of developing an effective, comprehensive water quality control and abatement plan for a basin.

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[1]/ This subsection added by section 101, PL89-753, approved 11/3/66.

(2) Each planning agency receiving a grant under this subsection shall develop a comprehensive pollution control and abatement plan for the basin which--

(A) is consistent with any applicable water quality standards established pursuant to current law within the basin;

(B) recommends such treatment works and sewer systems as will provide the most effective and economical means of collection, storage, treatment, and purification of wastes and recommends means to encourage both municipal and industrial use of such works and systems: and

(C) recommends maintenance and improvement of water quality standards within the basin or portion thereof and recommends methods of adequately financing those facilities as may be necessary to implement the plan.

(3) For the purposes of this subsection the term "basin" includes, but is not limited to, rivers and their tributaries, streams, coastal waters, sounds, estuaries, bays, lakes, and portions thereof, as well as the lands drained thereby.

INTERSTATE COOPERATION AND UNIFORM LAWS

Sec. 4. (a) The Secretary shall encourage cooperative activities by the States for the prevention and control of water pollution; encourage the enactment of improved and, so far as practicable, uniform State laws relating to the prevention and control of water pollution; and encourage compacts between States for the prevention and control of water pollution.

(b) The consent of the Congress is hereby given to two or more States to negotiate and enter into agreements or compacts, not in conflict with any law or treaty of the United States, for (1) cooperative effort and mutual assistance for the prevention and control of water pollution and the enforcement of their respective laws relating thereto, and (2) the establishment of such agencies, joint or otherwise, as they may deem desirable for making effective such agreements and compacts. No such agreement or compact shall be binding or obligatory upon any State a party thereto unless and until it has been approved by the Congress.

RESEARCH, INVESTIGATIONS, TRAINING, AND INFORMATION

Sec. 5. (a) The Secretary shall conduct in the Department of the Interior and encourage, cooperate with, and render assistance to other appropriate public (whether Federal, State, interstate, or local) authorities, agencies, and institutions, private agencies and institutions, and individuals in the conduct of, and promote the coordination of, research, investigations, experiments, demonstrations, and studies relating to the causes, control, and prevention of water pollution. In carrying out the foregoing, the Secretary is authorized to--

(1) collect and make available, through publications and other appropriate means, the results of and other information as to research, investigations, and demonstrations relating to the prevention and control of water pollution, including appropriate recommendations in connection therewith;

(2) make grants-in-aid to public or private agencies and institutions and to individuals for research or training projects and for demonstrations, and provide for the conduct of research, training, and demonstrations by contract with public or private agencies and institutions and with individuals without regard to sections 3648 and 3709 of the Revised Statutes;

(3) secure, from time to time and for such periods as he deems advisable, the assistance and advice of experts, scholars, and consultants as authorized by section 15 of the Administrative Expenses Act of 1946 (5 U.S.C. 55a);

(4) establish and maintain research fellowships in the Department of the Interior with such stipends and allowances, including traveling and subsistence expenses, as he may deem necessary to procure the assistance of the most promising research fellowships:
Provided, That the Secretary shall report annually to the appropriate committees of Congress on his operations under this paragraph; and

(5) provide training in technical matters relating to the causes, prevention, and control of water pollution to personnel of public agencies and other persons with suitable qualifications.

(b) The Secretary may, upon request of any State water pollution control agency, or interstate agency, conduct investigations and research and make surveys concerning any specific problem of water pollution confronting any State, interstate agency, community, municipality, or industrial plant, with a view of recommending a solution of such problem.

(c) The Secretary shall, in cooperation with other Federal, State, and local agencies having related responsibilities, collect and disseminate basic data on chemical, physical, and biological water quality and other information insofar as such data or other information relate to water pollution and the prevention and control thereof.

(d)[1] In carrying out the provisions of this section the Secretary shall develop and demonstrate under varied conditions (including conducting such basic and applied research, studies, and experiments as may be necessary):

(A) Practicable means of treating municipal sewage and other waterborne wastes to remove the maximum possible amounts of physical, chemical, and biological pollutants in order to restore and maintain the maximum amount of the Nation's water at a quality suitable for repeated reuse;

(B) Improved methods and procedures to identify and measure the effects of pollutants on water uses, including those pollutants created by new technological developments; and

(C) Methods and procedures for evaluating the effects on water quality and water uses of augmented streamflows to control water pollution not susceptible to other means of abatement.

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[1] Subsection 5(d) amended by section 201(c), PL89-753, effective 7/1/67. Amendment strikes out "(1)" before remaining language of subsection, and strikes out this provision: "(2) for the purposes of this subsection there is authorized to be appropriated not more than $5,000,000 for any fiscal year, and the total sum appropriated for such purposes shall not exceed $25,000,000."

(e) The Secretary shall establish, equip, and maintain field laboratory and research facilities, including, but not limited to, one to be located in the northeastern area of the United States, one in the Middle Atlantic area, one in the southeastern area, one in the midwestern area, one in the southwestern area, one in the Pacific Northwest, and one in the State of Alaska, for the conduct of research, investigations, experiments, field demonstrations and studies, and training relating to the prevention and control of water pollution. Insofar as practicable, each such facility shall be located near institutions of higher learning in which graduate training in such research might be carried out.

(f) The Secretary shall conduct research and technical development work, and make studies, with respect to the quality of the waters of the Great Lakes, including an analysis of the present and projected future water quality of the Great Lakes under varying conditions of waste treatment and disposal, an evaluation of the water quality needs of those to be served by such waters, an evaluation of municipal, industrial, and vessel waste treatment and disposal practices with respect to such waters, and a study of alternate means of solving water pollution problems (including additional waste treatment measures) with respect to such waters.

(g)(1) The Secretary shall, in cooperation with the Secretary of the Army, the Secretary of Agriculture, the Water Resources Council, and with other appropriate Federal, State, interstate, or local public bodies and private organizations, institutions, and individuals, conduct and promote, and encourage contributions to, a comprehensive study of the effects of pollution, including sedimentation, in the estuaries and estuarine zones of the United States on fish and wildlife, on sport and commercial fishing, on recreation, on water supply and water power, and on other beneficial purposes. Such study shall also consider the effect of demographic trends, the exploitation of mineral resources and fossil fuels, land and industrial development, navigation, flood and erosion control, and other uses of estuaries and estuarine zones upon the pollution of the waters therein.

(2) In conducting the above study, the Secretary shall assemble, coordinate, and organize all existing pertinent information on the Nation's estuaries and estuarine zones; carry out a program of investigations and surveys to supplement existing information in representative estuaries and estuarine zones; and identify the problems and areas where further research and study are required.

(3) The Secretary shall submit to the Congress a final report of the study authorized by this subsection not later than three years after the date of enactment of this subsection. 1/ Copies of the report shall be made available to all interested parties, public and private. The report shall include, but not be limited to--

(A) an analysis of the importance of estuaries to the economic and social well-being of the people of the United States and of the effects of pollution upon the use and enjoyment of such estuaries;

(B) a discussion of the major economic, social, and ecological trends occurring in the estuarine zones of the Nation;

1/ This subsection added by section 201(b), PL89-753, approved 11/3/66.

(C) recommendations for a comprehensive national program for the preservation, study, use, and development of estuaries of the Nation, and the respective responsibilities which should be assumed by Federal, State, and local governments and by public and private interests.

(4) There is authorized to be appropriated the sum of $1,000,000 per fiscal year for the fiscal years ending June 30, 1967, June 30, 1968, and June 30, 1969, to carry out the purposes of this subsection.

(5) For the purpose of this subsection, the term "estuarine zones" means an environmental system consisting of an estuary and those transitional areas which are consistently influenced or affected by water from an estuary such as, but not limited to, salt marshes, coastal and intertidal areas, bays, harbors, lagoons, inshore waters, and channels, and the term "estuary" means all or part of the mouth of a navigable or interstate river or stream or other body of water having unimpaired natural connection with open sea and within which the sea water is measurably diluted with fresh water derived from land drainage.

(h) 1/ There is authorized to be appropriated to carry out this section, other than subsection (g), not to exceed $60,000,000 for the fiscal year ending June 30, 1968, and $65,000,000 for the fiscal year ending June 30, 1969. Sums so appropriated shall remain available until expended.

GRANTS FOR RESEARCH AND DEVELOPMENT

Sec. 6. 2/(a) The Secretary is authorized to make grants to any State, municipality, or intermunicipal or interstate agency for the purpose of--

(1) assisting in the development of any project which will demonstrate a new or improved method of controlling the discharge into any waters of untreated or inadequately treated sewage or other wastes from sewers which carry storm water or both storm water and sewage or other wastes, or

(2) assisting in the development of any project which will demonstrate advanced waste treatment and water purification methods (including the temporary use of new or improved chemical additives which provide substantial immediate improvement to existing treatment processes) or new or improved methods of joint treatment systems for municipal and industrial wastes,

and for the purpose of reports, plans, and specifications in connection therewith.

(b) The Secretary is authorized to make grants to persons for research and demonstration projects for prevention of pollution of waters by industry including, but not limited to, treatment of industrial waste.

(c) Federal grants under subsection (a) of this section shall be subject to the following limitations:

(1) No grant shall be made for any project pursuant to this section unless such project shall have been approved by the appropriate State water pollution control agency or agencies and by the Secretary;

(2) No grant shall be made for any project in an amount exceeding 75 per centum of the estimated reasonable cost thereof as determined by the Secretary; and

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1/ This subsection added by section 201(c), PL89-753, approved 11/3/66.
2/ This section amended by section 201(a), PL-89-753, approved 11/3/66.

(3) No grant shall be made for any project under this section unless the Secretary determines that such project will serve as a useful demonstration for the purpose set forth in clause (1) or (2) of subsection (a).

(d) Federal grants under subsection (b) of this section shall be subject to the following limitations:

(1) No grant shall be made under this section in excess of $1,000,000;

(2) No grant shall be made for more than 70 per centum of the cost of the project; and

(3) No grant shall be made for any project unless the Secretary determines that such project will serve a useful purpose in the development or demonstration of a new or improved method of treating industrial wastes or otherwise preventing pollution of waters by industry, which method shall have industry-wide application.

(e) For the purposes of this section there are authorized to be appropriated--

(1) for the fiscal year ending June 30, 1966, and for each of the next three succeeding fiscal years, the sum of $20,000,000 per fiscal year for the purposes set forth in subsections (a) and (b) of this section, including contracts pursuant to such subsections for such purposes;

(2) for the fiscal year ending June 30, 1967, and for each of the next two succeeding fiscal years, the sum of $20,000,000 per fiscal year for the purpose set forth in clause (2) of subsection (a); and

(3) for the fiscal year ending June 30, 1967, and for each of the next two succeeding fiscal years, the sum of $20,000,000 per fiscal year for the purpose set forth in subsection (b).

GRANTS FOR WATER POLLUTION CONTROL PROGRAMS

Sec. 7. (a)[1] There are hereby authorized to be appropriated for the fiscal year ending June 30, 1957, and for each succeeding fiscal year to and including the fiscal year ending June 30, 1961, $3,000,000, for each succeeding fiscal year to and including the fiscal year ending June 30, 1967, $5,000,000, and for each succeeding fiscal year to and including the fiscal year ending June 30, 1971, $10,000,000 for grants to States and to interstate agencies to assist them in meeting the costs of establishing and maintaining adequate measures for the prevention and control of water pollution, including the training of personnel of public agencies.

(b) The portion of the sums appropriated pursuant to subsection (a) for a fiscal year which shall be available for grants to interstate agencies and the portion thereof which shall be available for grants to States shall be specified in the Act appropriating such sums.

(c) From the sums available therefor for any fiscal year the Secretary shall from time to time make allotments to the several States, in accordance with regulations, on the basis of (1) the population, (2) the extent of the water pollution problem, and (3) the financial need of the respective States.

(d) From each State's allotment under subsection (c) for any fiscal year the Secretary shall pay to such State an amount equal to its Federal share (as determined under subsection (h)) of the cost of carrying out its State plan approved under subsection (f), including the cost of training personnel for State and local water pollution control work and including the cost of adminstering the State plan.

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[1] This subsection amended by section 202, PL89-753, approved 11/3/66.

(e) From the sums available therefor for any fiscal year the Secretary shall from time to time make allotments to interstate agencies, in accordance with regulations, on such basis as the Secretary finds reasonable and equitable. He shall from time to time pay to each such agency, from its allotment, an amount equal to such portion of the cost of carrying out its plan approved under subsection (f) as may be determined in accordance with regulations, including the cost of training personnel for water pollution control work and including the cost of administering the interstate agency's plan. The regulations relating to the portion of the cost of carrying out the interstate agency's plan which shall be borne by the United States shall be designed to place such agencies, so far as practicable, on a basis similar to that of the States.

(f) The Secretary shall approve any plan for the prevention and control of water pollution which is submitted by the State water pollution control agency or, in the case of an interstate agency, by such agency, if such plan--

(1) provides for administration or for the supervision of administration of the plan by the State water pollution control agency or, in the case of a plan submitted by an interstate agency, by such interstate agency;

(2) provides that such agency will make such reports, in such form and containing such information, as the Secretary may from time to time reasonably require to carry out his functions under this Act;

(3) sets forth the plans, policies, and methods to be followed in carrying out the State (or interstate) plan and in its administration;

(4) provides for extension or improvement of the State or interstate program for prevention and control of water pollution;

(5) provides such accounting, budgeting, and other fiscal methods and procedures as are necessary for the proper and efficient administration of the plan; and

(6) sets forth the criteria used by the State in determining priority of projects as provided in section 8(b)(4).

The Secretary shall not disapprove any plan without first giving reasonable notice and opportunity for hearing to the State water pollution control agency or interstate agency which has submitted such plan.

(g) (1) Whenever the Secretary, after reasonable notice and opportunity for hearing to a State water pollution control agency or interstate agency finds that--

(A) the plan submitted by such agency and approved under this section has been so changed that it no longer complies with a requirement of subsection (f) of this section; or

(B) in the administration of the plan there is a failure to comply substantially with such a requirement,

the Secretary shall notify such agency that no further payments will be made to the State or to the interstate agency, as the case may be, under this section (or in his discretion that further payments will not be made to the State, or to the interstate agency, for projects under or parts of the plan affected by such failure) until he is satisfied that there will no longer be any such failure. Until he is so satisfied, the Secretary shall make no further payments to such State, or to such interstate agency, as the case may be, under this section (or shall limit payments to projects under or parts of the plan in which there is no such failure).

(2) If any State or any interstate agency is dissatisfied with the Secretary's action with respect to it under this subsection, it may appeal to the United States court of appeals for the circuit in which such State (or any of the member States, in the case of an interstate agency) is located. The summons and notice of appeal may be served at any place in the United States. The findings of fact by the Secretary, unless contrary to the weight of the evidence, shall be conclusive; but the court, for good cause shown, may remand the case to the Secretary to take further evidence, and the Secretary may thereupon make new or modified findings of fact and may modify his previous action. Such new or modified findings of fact shall likewise be conclusive unless contrary to the weight of the evidence. The court shall have jurisdiction to affirm the action of the Secretary or to set it aside, in whole or in part. The judgment of the court shall be subject to review by the Supreme Court of the United States upon certiorari or certification as provided in title 28, United States Code, section 1254.

(h) (1) The "Federal share" for any State shall be 100 per centum less that percentage which bears the same ratio to 50 per centum as the per capita income of such State bears to the per capita income of the United States, except that (A) the Federal share shall in no case be more than 66 2/3 per centum or less than 33 1/3 per centum, and (B) the Federal share for Puerto Rico and the Virgin Islands shall be 66 2/3 per centum.

(2) The "Federal shares" shall be promulgated by the Secretary between July 1 and September 30 of each even-numbered year, on the basis of the average of the per capita incomes of the States and of the continental United States for the three most recent consecutive years for which satisfactory data are available from the Department of Commerce.

(3) As used in this subsection, the term "United States" means the fifty States and the District of Columbia.

(4) Promulgations made before satisfactory data are available from the Department of Commerce for a full year on the per capita income of Alaska shall prescribe a Federal share for Alaska of 50 per centum and, for purposes of such promulgations, Alaska shall not be included as part of the "United States". Promulgations made thereafter but before per capita income data for Alaska for a full three-year period are available for the Department of Commerce shall be based on satisfactory data available therefrom for Alaska for such one full year or, when such data are available for a two-year period, for such two years.

(i) The population of the several States shall be determined on the basis of the latest figures furnished by the Department of Commerce.

(j) The method of computing and paying amounts pursuant to subsection (d) or (e) shall be as follows:

(1) The Secretary shall, prior to the beginning of each calendar quarter or other period prescribed by him, estimate the amount to be paid to each State (or to each interstate agency in the case of subsection (e)) under the provisions

of such subsection for such period, such estimate to be based on such records of the State (or the interstate agency) and information furnished by it, and such other investigation, as the Secretary may find necessary.

(2) The Secretary shall pay to the State (or to the interstate agency), from the allotment available therefor, the amount so estimated by him for any period, reduced or increased, as the case may be, by any sum (not previously adjusted under this paragraph) by which he finds that his estimate of the amount to be paid such State (or such interstate agency) for any prior period under such subsection was greater or less than the amount which should have been paid to such State (or such agency) for such prior period under such subsection. Such payments shall be made through the disbursing facilities of the Treasury Department, in such installments as the Secretary may determine.

GRANTS FOR CONSTRUCTION

Sec. 8. (a) The Secretary is authorized to make grants to any State, municipality, or intermunicipal or interstate agency for the construction of necessary treatment works to prevent the discharge of untreated or inadequately treated sewage or other waste into any waters and for the purpose of reports, plans, and specifications in connection therewith.

(b) Federal grants under this section shall be subject to the following limitations: (1) No grant shall be made for any project pursuant to this section unless such project shall have been approved by the appropriate State water pollution control agency or agencies and by the Secretary and unless such project is included in a comprehensive program developed pursuant to this Act; (2) no grant shall be made for any project in an amount exceeding 30 per centum of the estimated reasonable cost thereof as determined by the Secretary; (3) no grant shall be made unless the grantee agrees to pay the remaining cost; (4) no grant shall be made for any project under this section until the applicant has made provision satisfactory to the Secretary for assuring proper and efficient operation and maintenance of the treatment works after completion of the construction thereof; and (5) no grant shall be made for any project under this section unless such project is in conformity with the State water pollution control plan submitted pursuant to the provisions of section 7 and has been certified by the appropriate State water pollution control agency as entitled to priority over other eligible projects on the basis of financial as well as water pollution control needs; (6) the percentage limitation of 30 per centum imposed by clause (2) of this subsection shall be increased to a maximum of 40 per centum in the case of grants made under this section from funds allocated for a fiscal year to a State under subsection (c) of this section if the State agrees to pay not less than 30 per centum of the estimated reasonable cost (as determined by the Secretary) of all projects for which Federal grants are to be made under this section from such allocation; (7) the percentage limitations imposed by clause (2) of this subsection shall be increased to a maximum of 50 per centum in the case of grants made under this section from funds allocated for a fiscal year to a State under subsection (c) of this section if the State agrees to pay not less than 25 per centum of the estimated reasonable costs (as determined by the Secretary) of all projects for which Federal grants are to be made under this section from such allocation and if enforceable water quality standards have been established for the waters into which the project discharges, in accordance with section 10(c) of this Act in the case of interstate waters, and under State law in the case of intrastate waters. 1/

1/ Subsection 8(b) amended by Section 203, PL89-753, effective 7/1/67.
Until 7/1/67, subsection 8(b) reads as follows:

(b) Federal grants under this section shall be subject to the following limitations: (1) No grant shall be made for any project pursuant to this section unless such project shall have been approved by the appropriate State water pollution control agency or agencies and by the Secretary and unless such project is included in a comprehensive program developed pursuant to this Act; (2) except as otherwise provided in this clause, no grant shall be made for any project in an amount exceeding 30 per centum of the estimated reasonable cost thereof as determined by the Secretary, or in an amount exceeding $1,200,000, whichever is the smaller: Provided, That the grantee agrees to pay the remaining cost: Provided further, That, in the case of a project which will serve more than one municipality (A) the Secretary shall, on such basis as he determines to be reasonable and equitable, allocate to each municipality to be served by such project its share of the estimated reasonable cost of such project, and shall then apply the limitations provided in this clause (2) to each such share as if it were a separate project to determine the maximum amount of any grant which could be made under this section with respect to each such share, and the total of all the amounts so determined or $4,800,000, whichever is the smaller, shall be the maximum amount of the grant which may be made under this section on account of such project, and (B) for the purpose of the limitation in the last sentence of subsection (d), the share of each municipality so determined shall be regarded as a grant for the construction of treatment works; (3) no grant shall be made for any project under this section until the applicant has made provision satisfactory to the Secretary for assuring proper and efficient operation and maintenance of the treatment works after completion of the construction thereof; (4) no grant shall be made for any project under this section unless such project is in conformity with the State water pollution control plan submitted pursuant to the provisions of section 7 and has been certified by the State water pollution control agency as entitled to priority over other eligible projects on the basis of financial as well as water pollution control needs; and (5) no grant shall be made under this section for any project in any State in an amount exceeding $250,000 until a grant has been made thereunder for each project in such State (A) for which an application was filed with the appropriate State water pollution control agency prior to one year after the date of enactment of this clause and (B) which the Secretary determines met the requirements of this section and regulations thereunder as in effect prior to the date of enactment of this clause. The limitations of $1,200,000 and $4,800,000 imposed by clause (2) of this subsection shall not apply in the case of grants made under this section from funds allocated under the third sentence of subsection (c) of this section if the State agrees to match equally all Federal grants made from such allocation for projects in such State.

(c) In determining the desirability of projects for treatment works and of approving Federal financial aid in connection therewith, consideration shall be given by the Secretary to the public benefits to be derived by the construction and the propriety of Federal aid in such construction, the relation of the ultimate cost of constructing and maintaining the works to the public interest and to the public necessity for the works, and the adequacy of the provisions made or proposed by the applicant for such Federal financial aid for assuring proper and efficient operation and maintenance of the treatment works after completion of the construction thereof. The sums appropriated pursuant to subsection (d) for each fiscal year ending on or before June 30, 1965, and the first $100,000,000 appropriated pursuant to subsection (d) for each fiscal year beginning on or after July 1, 1965, shall be allotted by the Secretary from time to time, in accordance with regulations, as follows: (1) 50 per centum of such sums in the ratio that the population of each State bears to the population of all the States, and (2) 50 per centum of such sums in the ratio that the quotient obtained by dividing the per capita income of the United States by the per capita income of each State bears to the sum of such quotients for all the States. All sums in excess of $100,000,000 appropriated pursuant to subsection (d) for each fiscal year beginning on or after July 1, 1965, shall be allotted by the Secretary from time to time, in accordance with regulations, in the ratio that the population of each State bears to the population of all States. Sums allotted to a State under the two preceding sentences which are not obligated within six months following the end of the fiscal year for which they were allotted because of a lack of projects which have been approved by the State water pollution control agency under subsection (b)(1) of this section and certified as entitled to priority under subsection (b)(4) of this section, shall be reallotted by the Secretary, on such basis as he determines to be reasonable and equitable and in accordance with regulations promulgated by him, to States having projects approved under this section for which grants have not been made because of lack of funds: *Provided, however*, That whenever a State has funds subject to reallocation and the Secretary finds that the need for a project in a community in such State is due in part to any Federal institution or Federal construction activity, he may, prior to such reallocation, make an additional grant with respect to such project which will in his judgment reflect an equitable contribution for the need caused by such Federal institution or activity. Any sum made available to a State by reallotment under the preceding sentence shall be in addition to any funds otherwise allotted to such State under this Act. The allotments of a State under the second, third, and fourth sentences of this subsection shall be available, in accordance with the provisions of this section, for payments with respect to projects in such State which have been approved under this section, except 1/ that in the case of any project on which construction was initiated in such State after June 30, 1966, which was approved by the appropriate State water pollution control agency and which the Secretary finds meets the requirements of this section but was constructed without such assistance, such allotments for any fiscal year ending prior to July 1, 1971, shall also be available for payments in reimbursement of State or local funds used for such project prior to July 1, 1971, to the extent that assistance could have been provided under this section if such project had been approved pursuant to this section and adequate funds had been available. In the case of any project on which construction was initiated in such State after June 30, 1966,

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1/ Reimbursement provision added by section 204, PL 89-753, approved 11/3/66.

and which was constructed with assistance pursuant to this section but the amount of such assistance was a lesser per centum of the cost of construction than was allowable pursuant to this section, such allotments shall also be available for payments in reimbursement of State or local funds used for such project prior to July 1, 1971, to the extent that assistance could have been provided under this section if adequate funds had been available. Neither a finding by the Secretary that a project meets the requirements of this subsection, nor any other provision of this subsection, shall be construed to constitute a commitment or obligation of the United States to provide funds to make or pay any grant for such project. For purposes of this section, population shall be determined on the basis of the latest decennial census for which figures are available, as certified by the Secretary of Commerce, and per capita income for each State and for the United States shall be determined on the basis of the average of the per capita incomes of the States and of the continental United States for the three most recent consecutive years for which satisfactory data are available from the Department of Commerce.

(d) 1/ There are hereby authorized to be appropriated for each fiscal year through and including the fiscal year ending June 30, 1961, the sum of $50,000,000 per fiscal year for the purpose of making grants under this section. There are hereby authorized to be appropriated, for the purpose of making grants under this section, $80,000,000 for the fiscal year ending June 30, 1962, $90,000,000 for the fiscal year ending June 30, 1963, $100,000,000 for the fiscal year ending June 30, 1964, $100,000,000 for the fiscal year ending June 30, 1965, $150,000,000 for the fiscal year ending June 30, 1966, $150,000,000 for the fiscal year ending June 30, 1967; $450,000,000 for the fiscal year ending June 30, 1968; $700,000,000 for the fiscal year ending June 30, 1969; $1,000,000,000 for the fiscal year ending June 30, 1970; and $1,250,000,000 for the fiscal year ending June 30, 1971. Sums so appropriated shall remain available until expended. At least 50 per centum of the funds so appropriated for each fiscal year ending on or before June 30, 1965, and at least 50 per centum of the first $100,000,000 so appropriated for each fiscal year beginning on or after July 1, 1965, shall be used for grants for the construction of treatment works servicing municipalities of one hundred and twenty-five thousand population or under.

(e) The Secretary shall make payments under this section through the disbursing facilities of the Department of the Treasury. Funds so paid shall be used exclusively to meet the cost of construction of the project for which the amount was paid. As used in this section the term "construction" includes preliminary planning to determine the economic and engineering feasibility of treatment works, the engineering, architectural, legal, fiscal, and economic investigations and studies, surveys, designs, plans, working drawings, specifications, procedures, and other action necessary to the construction of treatment works; and the erection, building, acquisition, alteration, remodeling, improvement, or extension of treatment works; and the inspection and supervision of the construction of treatment works.

(f) Notwithstanding any other provisions of this section, the Secretary may increase the amount of a grant made under subsection (b) of this section by an additional 10 per centum of the amount of such grant for any project which has been certified to him by an official State, metropolitan, or regional planning

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1/ This subsection amended by section 205, PL89-753, approved 11/3/66.

agency empowered under State or local laws or interstate compact to perform metropolitan or regional planning for a metropolitan area within which the assistance is to be used, or other agency or instrumentality designated for such purposes by the Governor (or Governors in the case of interstate planning) as being in conformity with the comprehensive plan developed or in process of development for such metropolitan area. For the purposes of this subsection, the term "metropolitan area" means either (1) a standard metropolitan statistical area as defined by the Bureau of the Budget, except as may be determined by the President as not being appropriate for the purposes hereof, or (2) any urban area, including those surrounding areas that form an economic and socially related region, taking into consideration such factors as present and future population trends and patterns of urban growth, location of transportation facilities and systems, and distribution of industrial, commercial, residential, governmental, institutional, and other activities, which in the opinion of the President lends itself as being appropriate for the purposes hereof.

(g) The Secretary shall take such action as may be necessary to insure that all laborers and mechanics employed by contractors or subcontractors on projects for which grants are made under this section shall be paid wages at rates not less than those prevailing for the same type of work on similar construction in the immediate locality, as determined by the Secretary of Labor, in accordance with the Act of March 3, 1931, as amended, known as the Davis-Bacon Act (46 Stat. 1494; 40 U.S.C., secs. 276a through 276a-5). The Secretary of Labor shall have, with respect to the labor standards specified in this subsection, the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (15 F.R. 3176; 64 Stat. 1267; 5 U.S.C. 133z-15) and section 2 of the Act of June 13, 1934, as amended (48 Stat. 948; 40 U.S.C. 276c).

WATER POLLUTION CONTROL ADVISORY BOARD

Sec. 9. (a)(1) There is hereby established in the Department of the Interior a Water Pollution Control Advisory Board, composed of the Secretary or his designee, who shall be chairman[1] and nine members appointed by the President, none of whom shall be Federal officers or employees. The appointed members, having due regard for the purposes of this Act, shall be selected from among representatives of various State, interstate and local governmental agencies, of public or private interests contributing to, affected by, or concerned with water pollution, and of other public and private agencies, organizations, or groups demonstrating an active interest in the field of water pollution prevention and control, as well as other individuals who are expert in this field.

(2) (A) Each member appointed by the President shall hold office for a term of three years, except that (i) any member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term, and (ii) the terms of office of the members first taking office after June 30, 1956, shall expire as follows: three at the end of one year after such date, three at the end of two years after such date, and three at the end of three years after such date, as designated by the President at the time of appointment, and (iii) the term of any member under the preceding provisions shall be extended until the date on which his successor's appointment is effective. None of the members appointed by the President shall be eligible for reappointment within one year after the end of

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[1] Reorganization Plan No. 2 of 1966 provided that the Secretary of Health, Education, and Welfare shall be an additional member of the Board.

his preceding term but terms commencing prior to the enactment of the Water Pollution Control Act Amendments of 1956 shall not be deemed "preceding terms" for purposes of this sentence.

(B) The members of the Board who are not officers or employees of the United States, while attending conferences or meetings of the Board or while otherwise serving at the request of the Secretary, shall be entitled to receive compensation at a rate to be fixed by the Secretary, but not exceeding $50 per diem, including travel time, and while away from their homes or regular places of business they may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by law (5 U.S.C. 73b-2) for persons in the Government service employed intermittently.

(b) The Board shall advise, consult with, and make recommendations to the Secretary on matters of policy relating to the activities and functions of the Secretary under this Act.

(c) Such clerical and technical assistance as may be necessary to discharge the duties of the Board shall be provided from the personnel of the Department of the Interior.

ENFORCEMENT MEASURES AGAINST POLLUTION OF INTERSTATE OR NAVIGABLE WATERS

Sec. 10. (a) The pollution of interstate or navigable waters in or adjacent to any State or States (whether the matter causing or contributing to such pollution is discharged directly into such waters or reaches such waters after discharge into a tributary of such waters), which endangers the health or welfare of any persons, shall be subject to abatement as provided in this Act.

(b) Consistent with the policy declaration of this Act, State and interstate action to abate pollution of interstate or navigable waters shall be encouraged and shall not, except as otherwise provided by or pursuant to court order under subsection (h), be displaced by Federal enforcement action.

(c)(1) If the Governor of a State or a State water pollution control agency files, within one year after the date of enactment of this subsection, [1] a letter of intent that such State, after public hearings, will before June 30, 1967, adopt (A) water quality criteria applicable to interstate waters or portions thereof within such State, and (B) a plan for the implementation and enforcement of the water quality criteria adopted, and if such criteria and plan are established in accordance with the letter of intent, and if the Secretary determines that such State criteria and plan are consistent with paragraph (3) of this subsection, such State criteria and plan shall thereafter be the water quality standards applicable to such interstate waters or portions thereof.

(2) If a State does not (A) file a letter of intent or (B) establish water quality standards in accordance with paragraph (1) of this subsection, or if the Secretary or the Governor of any State affected by water quality standards established pursuant to this subsection desires a revision in such standards, the Secretary may, after reasonable notice and a conference of representatives of appropriate Federal departments and agencies, interstate agencies, States, municipalities and industries involved, prepare regulations setting forth standards of water quality to be applicable to interstate waters or portions

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[1] This subsection added by section 5(a), PL89-234, approved 10/2/65.

thereof. If, within six months from the date the Secretary publishes such regulations, the State has not adopted water quality standards found by the Secretary to be consistent with paragraph (3) of this subsection, or a petition for public hearing has not been filed under paragraph (4) of this subsection, the Secretary shall promulgate such standards.

(3) Standards of quality established pursuant to this subsection shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this Act. In establishing such standards the Secretary, the Hearing Board, or the appropriate State authority shall take into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other legitimate uses.

(4) If at any time prior to 30 days after standards have been promulgated under paragraph (2) of this subsection, the Governor of any State affected by such standards petitions the Secretary for a hearing, the Secretary shall call a public hearing, to be held in or near one or more of the places where the water quality standards will take effect, before a Hearing Board of five or more persons appointed by the Secretary. Each State which would be affected by such standards shall be given an opportunity to select one member of the Hearing Board. The Department of Commerce and other affected Federal departments and agencies shall each be given an opportunity to select a member of the Hearing Board[1] and not less than a majority of the Hearing Board shall be persons other than officers or employees of the Department of the Interior. The members of the Board who are not officers or employees of the United States, while participating in the hearing conducted by such Hearing Board or otherwise engaged on the work of such Hearing Board, shall be entitled to receive compensation at a rate fixed by the Secretary, but not exceeding $100 per diem, including travel time, and while away from their homes or regular places of business they may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by law (5 U.S.C. 73b-2) for persons in the Government service employed intermittently. Notice of such hearing shall be published in the Federal Register and given to the State water pollution control agencies, interstate agencies and municipalities involved at least 30 days prior to the date of such hearing. On the basis of the evidence presented at such hearing, the Hearing Board shall make findings as to whether the standards published or promulgated by the Secretary should be approved or modified and transmit its findings to the Secretary. If the Hearing Board approves the standards as published or promulgated by the Secretary, the standards shall take effect on receipt by the Secretary of the Hearing Board's recommendations. If the Hearing Board recommends modifications in the standards as published or promulgated by the Secretary, the Secretary shall promulgate revised regulations setting forth standards of water quality in accordance with the Hearing Board's recommendations which will become effective immediately upon promulgation.

(5) The discharge of matter into such interstate waters or portions thereof, which reduces the quality of such waters below the water quality standards established under this subsection (whether the matter causing or contributing

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[1] Reorganization Plan No. 2 of 1966 provided that the Secretary of the Interior shall give the Secretary of Health, Education, and Welfare an opportunity to select a member of the Hearing Board.

to such reduction is discharged directly into such waters or reaches such waters after discharge into tributaries of such waters), is subject to abatement in accordance with the provisions of paragraph (1) or (2) of subsection (g) of this section, except that at least 180 days before any abatement action is initiated under either paragraph (1) or (2) of subsection (g) as authorized by this subsection, the Secretary shall notify the violators and other interested parties of the violation of such standards. In any suit brought under the provisions of this subsection the court shall receive in evidence a transcript of the proceedings of the conference and hearing provided for in this subsection, together with the recommendations of the conference and Hearing Board and the recommendations and standards promulgated by the Secretary, and such additional evidence, including that relating to the alleged violation of the standards, as it deems necessary to a complete review of the standards and to a determination of all other issues relating to the alleged violation. The court, giving due consideration to the practicability and to the physical and economic feasibility of complying with such standards, shall have jurisdiction to enter such judgment and orders enforcing such judgment as the public interest and the equities of the case may require.

(6) Nothing in this subsection shall (A) prevent the application of this section to any case to which subsection (a) of this section would otherwise be applicable, or (B) extend Federal jurisdiction over water not otherwise authorized by this Act.

(7) In connection with any hearings under this section no witness or any other person shall be required to divulge trade secrets or secret processes.

(d)(1) Whenever requested by the Governor of any State or a State water pollution control agency, or (with the concurrence of the Governor and of the State water pollution control agency for the State in which the municipality is situated) the governing body of any municipality, the Secretary shall, if such request refers to pollution of waters which is endangering the health or welfare of persons in a State other than that in which the discharge or discharges (causing or contributing to such pollution) originates, give formal notification thereof to the water pollution control agency and interstate agency, if any, of the State or States where such discharge or discharges originate and shall call promptly a conference of such agency or agencies and of the State water pollution control agency and interstate agency, if any, of the State or States, if any, which may be adversely affected by such pollution. Whenever requested by the Governor of any State, the Secretary shall, if such request refers to pollution of interstate or navigable waters which is endangering the health or welfare of persons only in the requesting State in which the discharge or discharges (causing or contributing to such pollution) originate, give formal notification thereof to the water pollution control agency and interstate agency, if any, of such State and shall promptly call a conference of such agency or agencies, unless, in the judgment of the Secretary, the effect of such pollution on the legitimate uses of the waters is not of sufficient significance to warrant exercise of Federal jurisdiction under this section. The Secretary shall also call such a conference whenever, on the basis of reports, surveys, or studies, he has reason to believe that any pollution referred to in subsection (a) and endangering the health or welfare of persons in a State other than that in which the discharge or discharges originate is occurring; or he finds that substantial economic injury results from the inability to market shellfish or shellfish products in interstate commerce because of pollution referred to in subsection (a) and action of Federal, State, or local authorities.

(2) 1/ Whenever the Secretary, upon receipt of reports, surveys, or studies from any duly constituted international agency, has reason to believe that any pollution referred to in subsection (a) of this section which endangers the health or welfare of persons in a foreign country is occurring, and the Secretary of State requests him to abate such pollution, he shall give formal notification thereof to the State water pollution control agency of the State in which such discharge or discharges originate and to the interstate water pollution control agency, if any, and shall call promptly a conference of such agency or agencies, if he believes that such pollution is occurring in sufficient quantity to warrant such action. The Secretary, through the Secretary of State, shall invite the foreign country which may be adversely affected by the pollution to attend and participate in the conference, and the representative of such country shall, for the purpose of the conference and any further proceeding resulting from such conference, have all the rights of a State water pollution control agency. This paragraph shall apply only to foreign country which the Secretary determines has given the United States essentially the same rights with respect to the prevention and control of water pollution occurring in that country as is given that country by this paragraph. Nothing in this paragraph shall be construed to modify, amend, repeal, or otherwise affect the provisions of the 1909 Boundary Waters Treaty between Canada and the United States or the Water Utilization Treaty of 1944 between Mexico and the United States (59 Stat. 1219), relative to the control and abatement of water pollution in waters covered by those treaties.

(3) The agencies called to attend such conference may bring such persons as they desire to the conference. In addition, 2/ it shall be the responsibility of the chairman of the conference to give every person contributing to the alleged pollution or affected by it an opportunity to make a full statement of his views to the conference. Not less than three weeks' prior notice of the conference date shall be given to such agencies.

(4) Following this conference, the Secretary shall prepare and forward to all the water pollution control agencies attending the conference a summary of conference discussions including (A) occurrence of pollution of interstate or navigable waters subject to abatement under this Act; (B) adequacy of measures taken toward abatement of the pollution; and (C) nature of delays, if any, being encountered in abating the pollution.

(e) If the Secretary believes, upon the conclusion of the conference or thereafter, that effective progress toward abatement of such pollution is not being made and that the health or welfare of any persons is being endangered, he shall recommend to the appropriate State water pollution control agency that it take necessary remedial action. The Secretary shall allow at least six months from the date he makes such recommendations for the taking of such recommended action.

(f)(1) If, at the conclusion of the period so allowed, such remedial action has not been taken or action which in the judgment of the Secretary is reasonably calculated to secure abatement of such pollution has not been taken, the Secretary shall call a public hearing, to be held in or near one or more of the

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1/ This paragraph added by section 206, PL89-753, approved 11/3/66.
2/ This sentence added by section 207, PL89-753, approved 11/3/66.

places where the discharge or discharges causing or contributing to such pollution originated, before a Hearing Board of five or more persons appointed by the Secretary. Each State in which any discharge causing or contributing to such pollution originates and each State claiming to be adversely affected by such pollution shall be given an opportunity to select one member of the Hearing Board 1/ and at least one member shall be a representative of the Department of Commerce, and not less than a majority of the Hearing Board shall be persons other than officers or employees of the Department of the Interior. At least three weeks' prior notice of such hearing shall be given to the State water pollution control agencies and interstate agencies, if any, called to attend the aforesaid hearing and the alleged polluter or polluters. It shall be 2/ the responsibility of the Hearing Board to give every person contributing to the alleged pollution or affected by it an opportunity to make a full statement of his views to the Hearing Board. On the basis of the evidence presented at such hearing, the Hearing Board shall make findings as to whether pollution referred to in subsection (a) is occurring and whether effective progress toward abatement thereof is being made. If the Hearing Board finds such pollution is occurring and effective progress toward abatement thereof is not being made it shall make recommendations to the Secretary concerning the measures, if any, which it finds to be reasonable and equitable to secure abatement of such pollution. The Secretary shall send such findings and recommendations to the person or persons discharging any matter causing or contributing to such pollution, together with a notice specifying a reasonable time (not less than six months) to secure abatement of such pollution, and shall also send such findings and recommendations and such notice to the State water pollution control agency and to the interstate agency, if any, of the State or States where such discharge or discharges originate.

(2) 3/ In connection with any hearing called under this section the Secretary is authorized to require any person whose alleged activities result in discharges causing or contributing to water pollution to file with him, in such form as he may prescribe, a report based on existing data, furnishing such information as may reasonably be required as to the character, kind, and quantity of such discharges and the use of facilities or other means to prevent or reduce such discharges by the person filing such a report. Such report shall be made under oath or otherwise, as the Secretary may prescribe, and shall be filed with the Secretary within such reasonable period as the Secretary may prescribe, unless additional time be granted by the Secretary. No person shall be required in such report to divulge trade secrets or secret processes, and all information reported shall be considered confidential for the purposes of section 1905 of title 18 of the United States Code.

(3) 3/ If any person required to file any report under paragraph (2) of this subsection shall fail to do so within the time fixed by the Secretary for filing the same, and such failure shall continue for thirty days after notice of such default, such person shall forfeit to the United States the sum of $100 for each and every day of the continuance of such failure, which forfeiture shall be payable into the Treasury of the United States, and shall be recoverable in a civil suit in the name of the United States brought in the district where

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1/ Reorganization Plan No. 2 of 1966 provided that the Secretary of the Interior shall give the Secretary of Health, Education, and Welfare an opportunity to select a member of the Hearing Board.

2/ This sentence added by section 208(b), PL89-753, approved 11/3/66.

3/ This paragraph added by section 208(b), PL89-753, approved 11/3/66.

such person has his principal office or in any district in which he does business. The Secretary may upon application therefor remit or mitigate any forfeiture provided for under this paragraph and he shall have authority to determine the facts upon all such applications.

(4) 1/ It shall be the duty of the various United States attorneys, under the direction of the Attorney General of the United States, to prosecute for the recovery of such forfeitures.

(g) If action reasonably calculated to secure abatement of the pollution within the time specified in the notice following the public hearing is not taken, the Secretary--

(1) in the case of pollution of waters which is endangering the health or welfare of persons in a State other than that in which the discharge or discharges (causing or contributing to such pollution) originate, may request the Attorney General to bring a suit on behalf of the United States to secure abatement of pollution, and

(2) in the case of pollution of waters which is endangering the health or welfare of persons only in the State in which the discharge or discharges (causing or contributing to such pollution) originate, may, with the written consent of the Governor of such State, request the Attorney General to bring a suit on behalf of the United States to secure abatement of the pollution.

(h) The court shall receive in evidence in any such suit a transcript of the proceedings before the Board and a copy of the Board's recommendations and shall receive such further evidence as the court in its discretion deems proper. The court, giving due consideration to the practicability and to the physical and economic feasibility of securing abatement of any pollution proved, shall have jurisdiction to enter such judgment, and orders enforcing such judgment, as the public interest and the equities of the case may require.

(i) Members of any Hearing Board appointed pursuant to subsection (f) who are not regular full-time officers or employees of the United States shall, while participating in the hearing conducted by such Board or otherwise engaged on the work of such Board, be entitled to receive compensation at a rate fixed by the Secretary, but not exceeding $100 per diem, including travel time, and while away from their homes or regular places of business they may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by law (5 U.S.C. 73b-2) for persons in the Government service employed intermittently.

(j) As used in this section the term--

(1) "person" includes an individual, corporation, partnership, association, State, municipality, and political subdivision of a State, and

(2) "municipality" means a city, town, borough, county, parish, district, or other public body created by or pursuant to State law.

(k) 2/(1) At the request of a majority of the conferees in any conference called under this section the Secretary is authorized to request any person whose alleged activities result in discharges causing or contributing to water pollution, to file with him a report (in such form as may be prescribed in regulations promulgated by him) based on existing data, furnishing such information as may reasonably be requested as to the character, kind, and quantity of such discharges and the use of facilities or other means to prevent or reduce such discharges by

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1/ This paragraph added by section 208(b), PL89-753, approved 11/3/66.

2/ This subsection added by section 208(a), PL89-753, approved 11/3/66.

the person filing such a report. No person shall be required in such report to divulge trade secrets or secret processes, and all information reported shall be considered confidential for the purposes of section 1905 of title 18 of the United States Code.

(2) If any person required to file any report under this subsection shall fail to do so within the time fixed by regulations for filing the same, and such failure shall continue for thirty days after notice of such default, such person may, by order of a majority of the conferees, be subject to a forfeiture of $100 for each and every day of the continuance of such failure which forfeiture shall be payable into the Treasury of the United States and shall be recoverable in a civil suit in the name of the United States brought in the district where such person has his principal office or in any district in which he does business. The Secretary may upon application therefor remit or mitigate any forfeiture provided for under this subsection and he shall have authority to determine the facts upon all such applications.

(3) It shall be the duty of the various United States attorneys, under the direction of the Attorney General of the United States, to prosecute for the recovery of such forfeitures.

COOPERATION TO CONTROL POLLUTION FROM FEDERAL INSTALLATIONS1/

Sec. 11. It is hereby declared to be the intent of the Congress that any Federal department or agency having jurisdiction over any building, installation, or other property shall, insofar as practicable and consistent with the interests of the United States and within any available appropriations, cooperate with the Department of the Interior, and with any State or interstate agency or municipality having jurisdiction over waters into which any matter is discharged from such property, in preventing or controlling the pollution of such waters. In his summary of any conference pursuant to section 10(d)(3) of this Act, the Secretary shall include references to any discharges allegedly contributing to pollution from any Federal property. Notice of any hearing pursuant to section 10(f) involving any pollution alleged to be effected by any such discharges shall also be given to the Federal agency having jurisdiction over the property involved and the findings and recommendations of the Hearing Board conducting such hearing shall also include references to any such discharges which are contributing to the pollution found by such Hearing Board.

ADMINISTRATION

Sec. 12. (a) The Secretary is authorized to prescribe such regulations as are necessary to carry out his functions under this Act.

(b) The Secretary, with the consent of the head of any other agency of the United States, may utilize such officers and employees of such agency as may be found necessary to assist in carrying out the purposes of this Act.

(c) There are hereby authorized to be appropriated to the Department of the Interior such sums as may be necessary to enable it to carry out its functions under this Act.

1/ See Executive Order 11288, Prevention, Control, and Abatement of Water Pollution by Federal Activities, Appendix B.

(d) Each recipient of assistance under this Act shall keep such records as the Secretary shall prescribe, including records which fully disclose the amount and disposition by such recipient of the proceeds of such assistance, the total cost of the project or undertaking in connection with which such assistance is given or used, and the amount of that portion of the cost of the project or undertaking supplied by other sources, and such other records as will facilitate an effective audit.

(e) The Secretary of the Interior and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access for the purpose of audit and examination to any books, documents, papers, and records of the recipients that are pertinent to the grants received under this Act.

DEFINITIONS

Sec. 13. When used in this Act---

(a) The term "State water pollution control agency" means the State health authority, except that, in the case of any State in which there is a single State agency, other than the State health authority, charged with responsibility for enforcing State laws relating to the abatement of water pollution, it means such other State agency.

(b) The term "interstate agency" means an agency of two or more States established by or pursuant to an agreement or compact approved by the Congress, or any other agency of two or more States, having substantial powers or duties pertaining to the control of pollution of waters.

(c) The term "treatment works" means the various devices used in the treatment of sewage or industrial wastes of a liquid nature, including the necessary intercepting sewers, outfall sewers, pumping, power, and other equipment, and their appurtenances, and includes any extensions, improvements, remodeling, additions, and alterations thereof.

(d) The term "State" means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, and Guam.

(e) The term "interstate waters" means all rivers, lakes, and other waters that flow across or form a part of State boundaries, including coastal waters.

(f) The term "municipality" means a city, town, borough, county, parish, district, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, and an [1] Indian tribe or an authorized Indian tribal organization.

OTHER AUTHORITY NOT AFFECTED

Sec. 14. This Act shall not be construed as (1) superseding or limiting the functions, under any other law, of the Surgeon General or of the Public Health Service, or of any other officer or agency of the United States, relating to water pollution, or (2) affecting or impairing the provisions of the Oil Pollution Act, 1924, or sections 13 through 17 of the Act entitled "An Act making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors and for other purposes", approved March 3, 1899, as amended, or (3) affecting or impairing the provisions of any treaty of the United States.

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[1] Added to definition by section 209, PL89-753, approved 11/3/66.

SEPARABILITY

Sec. 15. If any provision of this Act, or the application of any provision of this Act to any person or circumstance, is held invalid, the application of such provision to other persons or circumstances, and the remainder of this Act, shall not be affected thereby.

Sec. 16. 1/ (a) In order to provide the basis for evaluating programs authorized by this act, the development of new programs, and to furnish the Congress with the information necessary for authorization of appropriations for fiscal years beginning after June 30, 1968, the Secretary, in cooperation with State water pollution control agencies and other water pollution control planning agencies, shall make a detailed estimate of the cost of carrying out the provisions of this Act; a comprehensive study of the economic impact on affected units of government of the cost of installation of treatment facilities; and a comprehensive analysis of the national requirements for and the cost of treating municipal, industrial, and other effluent to attain such water quality standards as established pursuant to this Act or applicable State law. The Secretary shall submit such detailed estimate and such comprehensive study of such cost for the five-year period beginning July 1, 1968, to the Congress no later than January 10, 1968, such study to be updated each year thereafter.

(b) The Secretary shall also make a complete investigation and study to determine (1) the need for additional trained State and local personnel to carry out programs assisted pursuant to this Act and other programs for the same purpose as this Act, and (2) means of using existing Federal training programs to train such personnel. He shall report the results of such investigation and study to the President and the Congress not later than July 1, 1967.

Sec. 17. 1/ The Secretary of the Interior shall, in consultation with the Secretary of the Army, the Secretary of the department in which the Coast Guard is operating, the Secretary of Health, Education, and Welfare, and the Secretary of Commerce, conduct a full and complete investigation and study of the extent of the pollution of all navigable waters of the United States from litter and sewage discharged, dumped, or otherwise deposited into such waters from watercraft using such waters, and methods of abating either in whole or in part such pollution. The Secretary shall submit a report of such investigation to Congress, together with his recommendations for any necessary legislation, not later than July 1, 1967.

Sec. 18. 1/ The Secretary of the Interior shall conduct a full and complete investigation and study of methods for providing incentives designed to assist in the construction of facilities and works by industry designed to reduce or abate water pollution. Such study shall include, but not be limited to, the possible use of tax incentives as well as other methods of financial assistance. In carrying out this study the Secretary shall consult with the Secretary of the Treasury as well as the head of any other appropriate department or agency of the Federal Government. The Secretary shall report the results of such investigation and study, together with his recommendations, to the Congress not later than January 30, 1968.

SHORT TITLE

Sec. 19. This Act may be cited as the "Federal Water Pollution Control Act".

1/ This section added by section 210, PL89-753, approved 11/3/66.

FEDERAL WATER POLLUTION CONTROL ACT, AS AMENDED

DISCRIMINATION PROHIBITED--Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance." Therefore, programs authorized by this Act, like every other program or activity receiving financial assistance from the Department of the Interior, must be operated in compliance with this law.

APPENDIX A

REORGANIZATION PLAN NO. 2 OF 1966

(Text with Explanatory Notes)

Providing for Reorganization of Certain Water Pollution Control Functions. Prepared by the President and Transmitted to Congress, February 28, 1966, Pursuant to the Provisions of the Reorganization Act of 1949, as Amended. Reorganization Plan Effective, with the Assent of Congress, May 10, 1966.

WATER POLLUTION CONTROL

SECTION 1. TRANSFERS OF FUNCTIONS AND AGENCIES.--(a) Except as otherwise provided in this section, all functions of the Secretary of Health, Education, and Welfare and of the Department of Health, Education, and Welfare under the Federal Water Pollution Control Act, as amended, hereinafter referred to as the Act (33 U.S.C. 466 et seq.), including all functions of other officers, or of employees or agencies, of that Department under the Act, are hereby transferred to the Secretary of the Interior.

(b) The Federal Water Pollution Control Administration is hereby transferred to the Department of the Interior.

(c)(1) The Water Pollution Control Advisory Board, together with its functions, is hereby transferred to the Department of the Interior.

(2) The functions of the Secretary of Health, Education, and Welfare (including those of his designee) under section 9 1/ of the Act shall be deemed to be hereby transferred to the Secretary of the Interior.

(3) The Secretary of Health, Education, and Welfare shall be an additional member of the said Board as provided for by section 9 1/ of the Act and as modified by this reorganization plan.

(d)(1) The Hearing Boards provided for in sections 10(c)(4) 2/ and 10(f) 3/ of the Act, including any Boards so provided for which may be in existence on the effective date of this reorganization plan, together with their respective functions, are hereby transferred to the Department of the Interior.

(2) The functions of the Secretary of Health, Education, and Welfare under the said sections 10(c)(4) 2/ and 10(f) 3/ shall be deemed to be hereby transferred to the Secretary of the Interior.

(3) The Secretary of the Interior shall give the Secretary of Health, Education, and Welfare opportunity to select a member of each Hearing Board appointed pursuant to sections 10(c)(4) 2/ and 10(f) 3/ of the Act as modified by this reorganization plan.

(e) There are excepted from the transfers effected by subsection (a) of this section (1) the functions of the Secretary of Health, Education, and Welfare and the Assistant Secretary of Health, Education, and Welfare under clause (2) of the second sentence of section 1(b) 4/ of the Act, and (2) so much of the functions of the Secretary of Health, Education, and Welfare under section 3(b)(2) 5/ of the Act as relates to public health aspects.

(f) The functions of the Surgeon General under section 2(k) of the Water Quality Act of 1965 (79 Stat. 905) 6/ are transferred to the Secretary of Health, Education, and Welfare. Within 90 days after this reorganization plan becomes effective, the Secretary of the Interior and the Secretary of Health, Education, and Welfare shall present to the President for his approval an interdepartmental agreement providing in detail for the implementation of the consultations provided for by said section 2(k). Such interdepartmental agreement may be modified from time to time by the two Secretaries with the approval of the President.

(g) The functions of the Secretary of Health, Education, and Welfare under sections 2(b), (c), and (g) 7/ of the Water Quality Act of 1965 are hereby transferred to the Secretary of the Interior: Provided, That the Secretary of the Interior may exercise the authority to provide further periods for the transfer to classified positions in the Federal Water Pollution Control Administration of commissioned officers of the Public Health Service under said section 2(b) only with the concurrence of the Secretary of Health, Education, and Welfare.

(h) The functions of the Secretary of Health, Education, and Welfare under the following provisions of law are hereby transferred to the Secretary of the Interior:

(1) Section 702(a) of the Housing and Urban Development Act of 1965 (79 Stat. 490). 8/

(2) Section 212 of the Appalachian Regional Development Act of 1965 (79 Stat. 16). 9/

(3) Section 106 of the Public Works and Economic Development Act of 1965 (79 Stat. 554). 10/

SEC. 2. ASSISTANT SECRETARY OF THE INTERIOR.--There shall be in the Department of the Interior one additional Assistant Secretary of the Interior, who shall be appointed by the President, by and with the advice and consent of the Senate, who shall, except as the Secretary of the Interior may direct otherwise, assist the Secretary in the discharge of the functions transferred to him hereunder, who shall perform such other duties as the Secretary shall from time to time prescribe, and who shall receive compensation at the rate now or hereafter prescribed by law for Assistant Secretaries of the Interior.

SEC. 3. PERFORMANCE OF TRANSFERRED FUNCTIONS.--The provisions of sections 2 and 5 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262) 11/ shall be applicable to the functions transferred hereunder to the Secretary of the Interior to the same extent as they are applicable to the functions transferred to the Secretary thereunder.

SEC. 4. INCIDENTAL PROVISIONS.--(a) So much of the personnel, property, records, and unexpended balances of appropriations, allocations, and other funds, employed, used, held, available, or to be made available in connection with the functions transferred to the Secretary of the Interior or the Department of the Interior by this reorganization plan as the Director of the Bureau of the Budget shall determine shall be transferred to the Department of the Interior at such time or times as the Director shall direct.

(b) Such further measures and dispositions as the Director of the Bureau of the Budget shall deem to be necessary in order to effectuate the transfers referred to in subsection (a) of this section shall be carried out in such manner as he shall direct and by such agencies as he shall designate.

(c) This reorganization plan shall not impair the transfer rights and benefits of commissioned officers of the Public Health Service provided by section 2 of the Water Quality Act of 1965. 7/

Sec. 5. ABOLITION OF OFFICE.--(a) There is hereby abolished that office of Assistant Secretary of Health, Education, and Welfare the incumbent of which is on date of the transmittal of this reorganization plan to the Congress the Assistant Secretary of Health, Education, and Welfare designated by the Secretary of Health, Education, and Welfare under the provisions of section 1(b) 12/ of the Act.

(b) The Secretary of Health, Education, and Welfare shall make such provisions as he shall deem to be necessary respecting the winding up of any outstanding affairs of the Assistant Secretary whose office is abolished by subsection (a) of this section.

1/ Section 9 relates to Water Pollution Control Advisory Board.

2/ Section 10(c)(4) relates to Hearing Board appointed to consider water quality standards.

3/ Section 10(f) relates to Hearing Board appointed to make findings and recommendations with respect to pollution of interstate or navigable waters which endangers the health or welfare of persons.

4/ Section 1(b) relates to the administration of functions of the Department of Health, Education, and Welfare related to water pollution, other than those authorized by the Act. The attached print of the Act reflects this provision of the reorganization plan.

5/ Section 3(b)(2) relates to giving advice to Federal construction agencies on the need for and the value of storage for streamflow regulation for water quality control in the planning of reservoirs.

6/ Section 2(k) of the Water Quality Act of 1965 does not amend the basic Federal Water Pollution Control Act. The subsection requires that the Surgeon General shall be consulted by the head of the Federal Water Pollution Control Administration on the public health aspects relating to water pollution over which the latter official has administrative responsibility.

7/ Section 2 of the Water Quality Act of 1965 includes provisions relating to the voluntary transfer to civil service status of commissioned officers of the Public Health Service performing functions relating to the Federal Water Pollution Control Act. These provisions do not amend the basic Federal Water Pollution Control Act.

8/ Section 207(a) of the Housing and Urban Development Act of 1965 provides that no grant for sewer facilities may be made by the Secretary of Housing and Urban Development (formerly the Housing and Home Finance Administrator) unless the Secretary of Health, Education, and Welfare certifies to the former official that any waste material carried by such facilities will be adequately treated before it is discharged into any public waterway so as to meet applicable Federal, State, interstate, or local water quality standards.

9/ Section 212 of the Appalachian Regional Development Act of 1965 authorizes the Secretary of Health, Education, and Welfare to make grants for the construction of sewage treatment works in the Appalachian Region in accordance with the provisions of the Federal Water Pollution Control Act, without regard to appropriation authorization ceilings or State allotments.

10/ Section 106 of the Public Works and Economic Development Act of 1965 provides that no financial assistance, through grants, loans, guarantees, or otherwise, shall be made under the Act to be used directly or indirectly for sewer or other waste disposal facilities unless the Secretary of Health, Education, and Welfare certifies to the Secretary of Commerce that any waste material carried by such facilities will be adequately treated before it is discharged into any public waterway so as to meet applicable Federal, State, interstate, or local water quality standards.

11/ Reorganization Plan No. 3 of 1950 transferred to the Secretary of the Interior (with certain exceptions) all functions of all other officers of the Department and all functions of all agencies and all employees of the Department. Section 2 authorized him to delegate functions to any other officer, any agency, or any employee of the Department. Section 5 authorized him to effect incidental transfers within the Department of records, property, personnel, and unexpended funds.

12/ Section 1(b) provides that the Secretary of Health, Education, and Welfare shall administer the Act through the Federal Water Pollution Control Administration and with the assistance of an Assistant Secretary of Health, Education, and Welfare designated by him. The attached print of the Act reflects the abolition of this position and the establishment of the position of an additional Assistant Secretary of the Interior under Section 2 of the reorganization plan.

APPENDIX B

EXECUTIVE ORDER 11288

PREVENTION, CONTROL, AND ABATEMENT OF WATER POLLUTION BY FEDERAL ACTIVITIES

By virtue of the authority vested in me as President of the United States and in furtherance of the purpose and policy of the Federal Water Pollution Control Act, as amended (33 U.S.C. 466), and Reorganization Plan No. 2 of 1966 (31 F.R. 6857), it is ordered as follows:

SECTION 1. *Policy.* The heads of the departments, agencies, and establishments of the Executive Branch of the Government shall provide leadership in the nationwide effort to improve water quality through prevention, control, and abatement of water pollution from Federal Government activities in the United States. In order to achieve these objectives—

(1) Pollution from all existing Federal facilities and buildings shall be controlled in accordance with plans to be submitted to the Director of the Bureau of the Budget pursuant to Section 3 of this order;

(2) New Federal facilities and buildings shall be constructed so as to meet the pollution control standards prescribed by Section 4 of this order;

(3) Pollution caused by all other operations of the Federal Government, such as water resources projects and operations under Federal loans, grants, or contracts, shall be reduced to the lowest level practicable;

(4) Review and surveillance of all such activities shall be maintained to assure that pollution control standards are met on a continuing basis;

(5) The Secretary of the Interior shall, in administering the Federal Water Pollution Control Act, as amended, provide technical advice and assistance to the heads of other departments, agencies, and establishments in connection with their duties and responsibilities under this order;

(6) The head of each department, agency, and establishment shall ensure compliance with Section 11 of the Federal Water Pollution Control Act, as amended (33 U.S.C.. 466h), which, as modified by Reorganization Plan No. 2 of 1966 (31 F.R. 6857), declares it to be the intent of Congress that Federal departments and agencies shall, insofar as practicable and consistent with the interests of the United States and within available appropriations, cooperate with the Secretary of the Interior and with State and interstate agencies and municipalities, in preventing or controlling water pollution; and

(7) Water pollution control needs shall be considered in the initial stages of planning for each new installation or project, and the head of each department, agency, and establishment shall establish appropriate procedures for securing advice and for consulting with the Secretary of the Interior at the earliest feasible stage.

SEC. 2. *Procedures for new Federal facilities and buildings.* (a) A request for funds to defray the cost of designing and constructing new facilities and buildings in the United States shall be included in the annual budget estimates of a department, agency, or establishment only if such request includes funds to defray the costs of such measures as may be necessary to assure that the new facility or building will meet the general standards prescribed by Section 4 of this order.

(b) Prior to any solicitation of bids for construction of any such new facility or building a description of the essential features of the water pollution control and treatment measures proposed for the project shall be submitted to the Secretary of the Interior for prompt review and advice as to the adequacy and effectiveness of the measures proposed and for advice as to any related operating procedures and continuing laboratory examinations deemed necessary to ensure effective plant operation.

Sec. 3. *Procedures for existing Federal facilities and buildings.* (a) In order to facilitate budgeting for corrective and preventive measures, the head of each department, agency, and establishment shall provide for an examination of all existing facilities and buildings under his jurisdiction in the United States and shall develop and present to the Director of the Bureau of the Budget, by July 1, 1966, a phased and orderly plan for installing such improvements as may be needed to prevent water pollution, or abate such water pollution as may exist, with respect to such buildings and facilities. Subsequent revisions needed to keep any such plan up-to-date shall be promptly submitted to the Director of the Bureau of the Budget. Future construction work at each such facility and the expected future use of the facility shall be considered in developing such a plan. Each such plan, and any revisions therein, shall be developed in consultation with the Secretary of the Interior in order to ensure that adoption of the measures proposed thereby will result in the prevention or abatement of water pollution in conformity with the general standards prescribed by Section 4 of this order.

(b) The head of each department, agency, and establishment shall present to the Director of the Bureau of the Budget, by July 1, 1967, and by the first of each fiscal year thereafter, an annual report describing the progress of his department, agency, or establishment in accomplishing the objectives of its pollution abatement plan.

Sec. 4. *General standards.* (a) Federal installations shall provide secondary treatment, or its equivalent, for all wastes except cooling water and fish hatchery effluents. Discharge of wastes into municipal sewerage systems maintaining adequate treatment is hereby declared to be the preferred method of disposal. However, whenever connection to such a system is not feasible, the department, agency, or establishment concerned shall be responsible for installing its own waste treatment system. Upon an application of the head of a department, agency, or establishment, a degree of treatment less than secondary may be approved with respect to an agency-installed system in an exceptional case if the Secretary of the Interior finds that a lesser degree of treatment is adequate to protect the quality of the receiving waters.

(b) If discharge of cooling water is expected to create problems by significantly increasing the temperature of the receiving waters, facilities shall be installed, or operating procedures shall be established, to maintain water temperatures within acceptable limits.

(c) Storage facilities for materials which are hazardous to health and welfare, and for oils, gases, fuels or other materials capable of causing water pollution, if accidentally discharged, shall be located so as to minimize or prevent any spillage which might result in water pollution. Engineering measures to entrap spillage, such as catchment areas, relief vessels, or entrapment-dikes, shall be installed so as to prevent accidental pollution of water.

(d) No waste shall be discharged into waters if it contains any substances in concentrations which are hazardous to health.

(e) No waste shall be discharged into waters if it contains any substances in concentrations which will result in substantial harm to domestic animals, fish, shellfish, or wildlife, if methods of treatment or disposal are available that will remove or render harmless such pollutants. If such methods are not available, but can reasonably be developed, they will be developed and used at the earliest possible date. A determination that such methods are not available or cannot reasonably be developed will not be made without the concurrence of the Secretary of the Interior.

(f) The head of each department, agency, and establishment shall, with respect to each installation in the United States under his jurisdiction, make, or cause to be made, such surveys as may be necessary to ensure that discharges of waste effluents from activities concerned with radioactivity are in accord with the applicable rules, regulations, or requirements of the Atomic Energy Commission (10 CFR, Part 20) and the policies and guidance of the Federal Radiation Council as published in the FEDERAL REGISTER.

(g) Construction and operating plans for waste treatment facilities shall include space for the conduct of necessary laboratory analyses and for the maintenance of records of results thereof whenever the size and complexity of the system makes this necessary.

(h) Construction and operating plans for waste treatment facilities shall take into account water quality standards promulgated pursuant to the provisions of the Water Quality Act of 1965 (79 Stat. 903).

(i) Any waste treatment facilities installed by any department, agency, or establishment shall as far as practicable be constructed so as to conform with any areawide program, meeting criteria established by the Secretary of Housing and Urban Development for a unified or officially coordinated areawide sewer facilities system as part of the comprehensively planned development of the area pursuant to Section 702(c) of the Housing and Urban Development Act of 1965, that may have been adopted with respect to the area concerned.

SEC. 5. *Modification of standards.* The standards prescribed by paragraphs (a) through (e) and (g) through (i) of Section 4 of this order may be supplemented or modified by the Secretary of the Interior, after consultation with the Director of the Bureau of the Budget. All such changes shall be published in the FEDERAL REGISTER.

SEC. 6. *Procedures for Federal water resources projects.* (a) The Secretaries of Agriculture and the Army, the Tennessee Valley Authority, and the United States Section of the International Boundary and Water Commission shall present for the consideration of the Secretary of the Interior any plans that they propose to recommend with respect to the authorization or construction of any Federal water resource development project in the United States. Such plans must be consistent with the general standards prescribed by Section 4 of this order to the fullest extent practicable. The Secretary of the Interior shall review such plans and supporting data relating to water quality, and shall prepare a report to the head of the responsible department, agency, or establishment describing the potential impact of the project on water quality, including recommendations concerning any changes or other measures with respect thereto which he considers to be necessary with respect to the design, construction, and operation of the project.

(b) The report of the Secretary of the Interior shall accompany any report proposing authorization or construction of such a water resource development project. In any case in which the Secretary of the Interior fails to submit a report within 90 days after receipt of project plans, the head of the department, agency, or establishment concerned may propose authorization or construction of the project without such an accompanying report. In any such case, the head of the department, agency, or establishment concerned shall explicitly state in his report concerning the project that the Secretary of the Interior has not reported on the potential impact of the project on water quality.

SEC. 7. *Review of facilities or operations supported by Federal loans, grants, or contracts.* (a) The head of each department, agency, and establishment shall conduct a review of the loan, grant, and contract practices of his organization to determine the extent to which water pollution control standards similar to those set forth in this order for direct Federal operations should be adhered to by borrowers, grantees, or contractors with respect to their operations in the United States. The head of each department, agency, and establishment shall review all such activities for which there is a significant potential for reduction of water pollution and develop appropriate recommendations for accomplishing such reduction. In conducting this review, necessary technical assistance should be sought from the Secretary of the Interior and the heads of other appropriate Federal agencies. A report on the results of this review shall be submitted to the Director of the Bureau of the Budget by July 1, 1966.

(b) The heads of departments, agencies, and establishments are encouraged to prescribe regulations covering loan, grant, or contract practices designed to reduced water pollution.

SEC. 8. *Study of water pollution from vessel operations.* The Secretary of the Interior shall make a comprehensive study of the problem of water pollution within the United States caused by the operation of vessels, and shall develop such recommendations for corrective or preventive action as may be appropriate, including recommendations with respect to vessels operated by any department, agency, or establishment of the Federal Government. The results of the study and recommendations shall be transmitted to the President by January 1, 1967. The study and report thereon shall be prepared in consultation with, and with the advice and assistance of, the Secretary of Defense, the Secretary of the Treasury, the Secretary of Commerce, and the Secretary of Health, Education, and Welfare.

SEC. 9. *Prior Executive order superseded.* Executive Order No. 11258 of November 17, 1965, is hereby superseded.

LYNDON B. JOHNSON

THE WHITE HOUSE,
July 2, 1966.

[F.R. Doc. 66-7460; Filed, July 5, 1966; 4:46 p.m.]

THE OIL POLLUTION ACT, 1924

(33 U.S.C. 431 et seq.)

NOTE: Responsibility for administration of the Oil Pollution Act, 1924, was transferred from the Secretary of the Army to the Secretary of the Interior, effective December 3, 1966, pursuant to Section 211 of the Clean Water Restoration Act of 1966 (Public Law 89-753), approved November 3, 1966.

Short title.

Section 1. This Act may be cited as the "Oil Pollution Act, 1924".

Definitions.

Sec. 2. When used in this Act, unless the context otherwise requires--

(1) "oil" means oil of any kind or in any form, including fuel oil, sludge, and oil refuse;

(2) "person" means an individual, company, partnership, corporation, or association; any owner, operator, master, officer, or employee of a vessel; and any officer, agent or employee of the United States;

(3) "discharge" means any grossly negligent, or willful spilling, leaking, pumping, pouring, emitting, or emptying of oil;

(4) "navigable waters of the United States" means all portions of the sea within the territorial jurisdiction of the United States, and all inland waters navigable in fact; and

(5) "Secretary" means the Secretary of the Interior.

Prohibitions.

Sec. 3. (a) Except in case of emergency imperiling life or property, or unavoidable accident, collision, or stranding, and except as otherwise permitted by regulations prescribed by the Secretary as hereinafter authorized, it is unlawful for any person to discharge or permit the discharge from any boat or vessel of oil by any method, means, or manner into or upon the navigable waters of the United States, and adjoining shorelines of the United States.

(b) Any person discharging or permitting the discharge of oil from any boat or vessel, into or upon the navigable waters of the United States shall remove the same from the navigable waters of the United States, and adjoining shorelines immediately. If such person fails to do so, the Secretary may remove the oil or may arrange for its removal, and such person shall be liable to the United States, in addition to the penalties prescribed in section 4 of this Act, for all costs and expenses reasonably incurred by the Secretary in removing the oil from the navigable waters of the United States, and adjoining shorelines of the United States. These costs and expenses shall constitute a lien on such boat or vessel which may be recovered in proceedings by libel in rem.

(c) The Secretary may prescribe regulations which--

(1) permit the discharge of oil from boats or vessels in such quantities under such conditions, and at such times and places as in his opinion will not be deleterious to health or marine life or a menace to navigation, or dangerous to persons or property engaged in commerce on navigable waters of the United States; and

(2) relate to the removal or cost of removal, or both, of oil from the navigable waters of the United States, and adjoining shorelines of the United States.

Penalties.

Sec. 4. (a) Any person who violates section 3(a) of this Act shall, upon conviction thereof, be punished by a fine not exceeding $2,500, or by imprisonment not exceeding one year, or by both such fine and imprisonment for each offense.

(b) Any boat or vessel other than a boat or vessel owned and operated by the United States from which oil is discharged in violation of section 3(a) of this Act shall be liable for a penalty of not more than $10,000. Clearance of a boat or vessel liable for this penalty from a port of the United States may be withheld until the penalty is paid. The penalty shall constitute a lien on such boat or vessel which may be recovered in proceedings by libel in rem in the district court of the United States for any district within which such boat or vessel may be.

Revocation or suspension of license.

Sec. 5. The Commandant of the Coast Guard may, subject to the provisions of section 4450 of the Revised Statutes, as amended (46 U.S.C. 239), suspend or revoke a license issued to the master or other licensed officer of any boat or vessel found violating the provisions of section 3 of this Act.

Enforcement.

Sec. 6. In the administration of this Act the Secretary may, with the consent of the Commandant of the Coast Guard or the Secretary of the Army, make use of the organization, equipment, and agencies, including engineering, clerical, and other personnel, employed by the Coast Guard or the Department of the Army, respectively, for the preservation and protection of navigable waters of the United States. For the better enforcement of the provisions of this Act, the officers and agents of the United States in charge of river and harbor improvements and persons employed under them by authority of the Secretary of the Army, and persons employed by the Secretary, and officers of the Customs and Coast Guard of the United States shall have the power and authority and it shall be their duty to swear out process and to arrest and take into custody, with or without process, any person who may violate any of such provisions, except that no person shall be arrested without process for a violation not committed in the presence of some one of the aforesaid persons. Whenever any arrest is made under the provisions of this Act the person so arrested shall be brought forthwith before a commissioner, judge, or court of the United States for examination of the offenses alleged against him, and such commissioner, judge or court shall proceed in respect thereto as authorized by law in cases of crimes against the United States.

Other authority not affected.

Sec. 7. This Act shall be in addition to other laws for the preservation and protection of navigable waters of the United States and shall not be construed as repealing, modifying, or in any manner affecting the provisions of such laws.

Interdepartmental Agreement Concerning Consultation on Health Aspects of Water Pollution Control

1. This Interdepartmental Agreement has been developed in accordance with the provisions of Section 1(f) of Reorganization Plan No. 2 of 1966, which states:

> "The functions of the Surgeon General under Section 2(k) of the Water Quality Act of 1965 (79 Stat. 905) are transferred to the Secretary of Health, Education, and Welfare. Within 90 days after this reorganization plan becomes effective, the Secretary of the Interior and the Secretary of Health, Education, and Welfare shall present to the President for his approval an interdepartmental agreement providing in detail for the implementation of the consultations provided for by said Section 2(k). Such interdepartmental agreement may be modified from time to time by the two Secretaries with the approval of the President."

2. The functions referred to above are defined by Section 2(k) of the Water Quality Act of 1965, as follows:

> "The Surgeon General shall be consulted by the head of the Administration on the public health aspects relating to water pollution over which the head of such Administration has administrative responsibility."

3. The public health aspects of water pollution relate to man's drinking water; to his contact with water in recreation and work; to the contamination of food sources, particularly shellfish; and to the breeding of specific insect vectors of disease. The health threat is of three types; (a) chemical - both organic and inorganic contaminants, which can result in acute toxic or long-term chronic effects on humans; (b) biological - microbiological contaminants and insect vectors associated with spread of communicable disease; and (c) radiological - radioactive contaminants which in very low level concentrations may produce radiation damage in humans.

4. Consultation between the Department of Health, Education, and Welfare and the Interior under the terms of this Agreement shall be based upon the following general concept:

   (a) The Department of the Interior is responsible for administering the Federal Water Pollution Control Act as amended; certain functions relating to water pollution control under Sections 702(a) of the Housing and Urban Development Act of 1965, Section 212 of the Appalachian Regional Development Act of 1965, and Section 106 of the Public Works and Economic Development Act of 1965, and Executive Order 11288, "Prevention, Control, and Abatement of Water Pollution by Federal Activities."

The stated purpose of the Federal Water Pollution Control Act is "to enhance the quality and value of the nation's water resources and to establish a national policy for the prevention, control, and abatement of water pollution." The responsibilities of the Department of the Interior, under the above legislation and Executive Order, involve the prevention and control of water pollution in consequence of the benefits resulting to the public health and welfare, giving due regard to the improvements which are necessary to conserve the nation's waters for public water supplies, propagation of fish and aquatic life and wildlife, recreational purposes, and agricultural, industrial, and other legitimate uses. To meet these responsibilities the Department of the Interior, through the Federal Water Pollution Control Administration, conducts programs to identify and measure the extent of pollution and its effects on water uses and to assure the treatment and control of waterborne wastes.

(b) The Department of Health, Education, and Welfare, under the Public Health Service Act as amended, is responsible for the protection of the public health. Within this responsibility, the Department through the Public Health Service is, therefore, concerned with the causes, diagnosis, treatment, control and prevention of physical and mental diseases and impairments of man. As related to Reorganization Plan No. 2, these responsibilities include: determination of the health significance of water pollution; investigation of waterborne diseases and means for their control; provision of consultation to the Department of the Interior on the public health aspects of water pollution; and advising on the public health questions involved in the inclusion of storage for water quality control in Federal reservoirs.

5. Under the terms of this Interdepartmental Agreement the Department of Health, Education, and Welfare will provide advice to the Department of the Interior as follows:

(a) Recommendations on criteria for water quality standard setting based on health aspects of intended water use for drinking water supplies, shellfish and other marine food production, bathing, and other water contact activities. Recommendations will be provided and modified as new supporting data are developed.

(b) Upon request, consultation and technical assistance on specific water-related health problems, as these may arise in connection with water pollution control activities, such as comprehensive pollution control programs, enforcement actions, control of pollution from Federal installations, water pollution research projects, construction grants, and the study of water pollution from vessel operations. In cases where epidemiological surveillance activities indicate that a probable public health hazard exists, the Public Health Service will initiate appropriate action to advise the Federal Water Pollution Control Administration.

(c) Review and comment on construction grant applications and on requirements for control of pollution from Federal installations for specific projects whose operation may adversely affect the sanitation of shellfish-growing waters. The Federal Water Pollution Control Administration will refer all such projects to the Public Health Service for review and comment.

6. Section 1(e) of Reorganization Plan No. 2 of 1966 provides for the Department of Health, Education, and Welfare to advise on public health questions involved in determinations by Federal agencies of the need for and value of the inclusion of storage for water quality control in Federal reservoirs. Advice on the effects of streamflow regulation on public health will be provided by the Public Health Service based upon the studies prepared by the Federal Water Pollution Control Administration under Section 3(b) of the Federal Water Pollution Control Act. The Federal Water Pollution Control Administration report will be provided to the Public Health Service for review and comment. The Public Health Service comments, together with its own report on the production of disease-transmitting insects and other environmental health considerations in the project area, will be submitted to the Federal construction agency concerned.

7. To assure an adequate basis for such advice and consultation to the Department of the Interior, the Department of Health, Education, and Welfare will, through the Public Health Service, conduct the following kinds of studies on the health aspects of water pollution:

(a) Epidemiological, microbiological, radiological, and toxicological research and investigations into the human health significance of waterborne contaminants, to determine health tolerance for such contaminants as they affect drinking water supplies, shellfish, and other marine foods production, and water contact activities.

(b) Epidemiological surveillance of the incidence of waterborne disease based on disease reporting, and on health-related water quality data derived from the Public Health Service drinking water quality network established under the Interstate Quarantine Regulations, the National Shellfish Sanitation Program, and the Radiation Surveillance Center, and on data from the program activities of the Federal Water Pollution Control Administration.

Investigation of waterborne disease outbreaks will be conducted in cooperation with State and local health departments. Data and participation will be requested from the Federal Water Pollution Control Administration when water pollution is involved in the outbreak. Reports based on these investigations which identify pollution that presents a danger to health will be referred to the Federal Water Pollution Control Administration for appropriate action.

(c) Studies of the relationship of surface water characteristics to the production of disease vectors such as disease-transmitting insects, snails, and protozoa.

(d) Development of techniques for the identification, measurement, and study of the behavior of waterborne contaminants which cause of influence disease, such as viruses, bacteria, organic chemicals, and trace elements. The results of these Public Health Service studies will be made available to the Federal Water Pollution Control Administration as a complement to its studies on identification and measurement of water pollutants, the results of which in turn will be made available to the Public Health Service.

(e) Study of methods of removing contaminants of health significance to meet human tolerance levels as related to drinking water, swimming pools, shellfish depuration, and food processing. To avoid duplication of Federal installations for pilot plants, when such facilities are required to study methods of removing contaminants from drinking water, Public Health Service personnel may use Department of the Interior facilities. To assure that such installations will adequately serve such purposes, the Department of the Interior shall consult with the Department of Health, Education, and Welfare in their design.

(f) Study of the human health relationship of waterborne contaminants to animals and plants used as sources of foods, such as shellfish and other marine foods, food crops irrigated with polluted water, including their field packaging, and use of sewage sludge as a fertilizer and soil conditioner.

8. The Public Health Service and the Federal Water Pollution Control Administration will exchange on a regular basis relevant health-related water quality data and research results. Particular attention will be given to prompt exchange of significant new findings which would affect the program responsibilities of either agency.

9. To effect essential coordination between Public Health Service and the Federal Water Pollution Control Administration, and to insure fulfillment of this agreement, each agency will designate an official liaison representative. These representatives, together with appropriate staff, shall meet at the request of either agency to discuss measures taken to implement this agreement and review any evident or emerging technical, administrative of fiscal problems which either agency considers might affect the proper functioning of this agreement. Any unresolved problems will be brought to the attention of the respective Secretaries.

Stewart L. Udall
Secretary of the Interior

August 8, 1966

John W. Gardner
Secretary of Health, Education, and Welfare

August 8, 1966

Lyndon B. Johnson
The President

September 1, 1966

ALLOCATIONS OF GRANT-IN-AID FUNDS FOR WASTE TREATMENT WORKS CONSTRUCTION

ALLOCATIONS OF GRANT-IN-AID FUNDS FOR WATER POLLUTION CONTROL PROGRAMS FOR STATE AND INTERSTATE AGENCIES

DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION

Grant-in-Aid Funds for Waste Treatment Works Construction

STATE OR TERRITORY	1966 ALLOCATIONS	1967 ALLOCATIONS	1968 AUTHORIZATION a/
Alabama	$2,661,760	$3,012,350	$ 8,403,950
Alaska	797,320	811,300	1,184,500
Arizona	1,481,520	1,624,000	3,773,200
Arkansas	2,045,560	2,259,300	5,207,400
California	7,582,460	9,314,300	35,254,400
Colorado	1,563,970	1,756,200	4,650,900
Connecticut	1,739,710	2,028,750	6,212,850
Delaware	804,300	853,250	1,589,750
District of Columbia	938,640	1,016,100	2,277,000
Florida	3,115,180	3,642,200	11,814,500
Georgia	2,829,490	3,256,600	9,764,500
Hawaii	1,075,480	1,145,750	2,190,050
Idaho	1,310,500	1,373,600	2,474,600
Illinois	5,110,830	6,233,000	22,871,300
Indiana	2,864,550	3,384,250	11,079,250
Iowa	2,087,700	2,384,700	6,935,700
Kansas	1,828,500	2,078,900	5,674,400
Kentucky	2,456,120	2,802,450	7,816,650
Louisiana	2,562,340	2,913,900	8,289,300
Maine	1,412,060	1,519,350	3,118,950
Maryland	2,087,440	2,430,150	7,547,550
Massachusetts	2,962,920	3,539,550	12,036,750
Michigan	4,241,170	5,077,750	17,989,450
Minnesota	2,359,330	2,743,250	8,377,550
Mississippi	2,427,490	2,653,850	6,248,750
Missouri	2,699,900	3,177,950	10,307,450
Montana	1,201,560	1,272,700	2,386,300
Nebraska	1,470,770	1,646,400	3,975,600
Nevada	736,320	777,950	1,248,650
New Hampshire	1,123,570	1,212,750	2,214,450
New Jersey	3,345,980	4,027,600	14,040,400
New Mexico	1,439,760	1,533,900	3,103,500
New York	8,041,630	9,890,950	37,588,750
North Carolina	3,115,100	3,610,000	11,129,500
North Dakota	1,267,870	1,308,450	2,352,150

STATE OR TERRITORY	1966 ALLOCATIONS	1967 ALLOCATIONS	1968 AUTHORIZATION a/
Ohio	$5,068,570	$6,129,950	$22,149,650
Oklahoma	2,025,620	2,277,450	6,120,150
Oregon	1,577,750	1,776,050	4,695,050
Pennsylvania	5,790,910	7,035,150	25,716,750
Rhode Island	1,192,190	1,297,800	2,716,200
South Carolina	2,310,540	2,569,700	6,502,100
South Dakota	1,302,070	1,393,350	2,516,550
Tennessee	2,698,070	3,094,100	8,981,300
Texas	5,165,060	6,222,500	22,033,100
Utah	1,325,250	1,424,000	2,894,000
Vermont	1,111,150	1,178,700	1,822,200
Virginia	2,717,470	3,130,600	9,677,800
Washington	2,042,910	2,345,300	7,054,400
West Virginia	1,882,500	2,096,150	5,166,650
Wisconsin	2,572,200	3,009,050	9,531,050
Wyoming	944,630	992,850	1,537,650
Guam	1,498,370	1,492,450	1,603,150
Puerto Rico	2,502,930	2,748,150	6,625,950
Virgin Islands	1,483,010	1,473,250	1,526,350
Total	$130,000,000	$150,000,000	$450,000,000

a/ Tentative allocations under Clean Water Restoration Act of 1966.

DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION

Grant-in-Aid Funds for Water Pollution Control Programs for State and Interstate Agencies

STATE OR TERRITORY	1966 ALLOCATIONS	1967 ALLOCATIONS	1968 AUTHORIZATION a/
Alabama	$ 96,100	$ 95,900	$184,900
Alaska	15,500	15,400	19,000
Arizona	39,800	39,900	69,600
Arkansas	61,000	61,400	113,900
California	289,900	294,200	593,700
Colorado	45,300	45,100	80,200
Connecticut	82,200	83,000	158,300
Delaware	45,300	45,400	80,700
District of Columbia	47,400	47,200	84,400
Florida	125,900	125,300	245,500
Georgia	109,700	109,500	213,000
Hawaii	38,100	38,100	65,800
Idaho	26,400	26,100	41,100
Illinois	201,500	203,700	407,100
Indiana	112,000	112,500	219,200
Iowa	67,900	67,000	125,400
Kansas	53,600	53,600	97,700
Kentucky	86,500	86,600	165,800
Louisiana	93,700	93,800	180,700
Maine	36,400	36,200	62,000
Maryland	87,000	87,900	168,300
Massachusetts	130,700	130,800	256,800
Michigan	177,100	174,000	346,000
Minnesota	80,400	80,800	153,700
Mississippi	78,300	77,400	146,800
Missouri	93,600	94,400	181,800
Montana	24,700	24,400	37,600
Nebraska	39,400	39,500	68,600
Nevada	17,000	17,400	23,100
New Hampshire	34,600	35,000	59,400
New Jersey	147,700	149,100	294,500
New Mexico	31,400	31,300	51,700
New York	311,300	311,300	628,900
North Carolina	128,300	127,700	250,600
North Dakota	24,800	24,300	37,400

STATE OR TERRITORY	1966 ALLOCATIONS	1967 ALLOCATIONS	1968 AUTHORIZATION a/
Ohio	$213,700	$212,700	$425,700
Oklahoma	63,700	63,400	117,900
Oregon	45,600	45,800	81,800
Pennsylvania	237,700	236,200	474,200
Rhode Island	58,300	58,400	107,700
South Carolina	81,700	80,500	153,200
South Dakota	26,300	26,100	41,000
Tennessee	103,900	104,100	202,000
Texas	204,200	205,200	410,300
Utah	31,400	31,200	51,600
Vermont	26,000	25,700	40,200
Virginia	104,200	103,000	199,500
Washington	65,100	64,200	119,500
West Virginia	57,000	57,100	105,000
Wisconsin	101,300	101,300	196,100
Wyoming	17,700	17,600	23,600
Guam	40,800	40,900	71,500
Puerto Rico	100,900	101,200	195,900
Virgin Islands	40,000	40,200	70,100
Total	$4,700,000	$4,700,000	$9,000,000

a/ Tentative allocations under Clean Water Restoration Act of 1966.

Basis for allocation:

1. $12,000 basic grant
2. Remainder: 2/3 population weighted by per capita income
   1/6 population density
   1/6 no. of "wet" industries

Allocations to Interstate Agencies

	1966 ALLOCATIONS	1967 ALLOCATIONS	1968 AUTHORIZATION a/
New England Interstate Water Pollution Control Commission Connecticut New York Massachusetts Vermont New Hampshire Maine Rhode Island	$40,600	$40,600	$136,700
Ohio River Valley Water Sanitation Commission West Virginia New York Pennsylvania Virginia Illinois Kentucky Indiana Ohio	92,000	92,100	306,300
Delaware River Basin Commission Pennsylvania Delaware New Jersey New York	40,000	40,000	134,000
Interstate Sanitation Commission Connecticut New York New Jersey	65,200	65,200	218,400
Klamath River Compact Commission California Oregon	7,500	7,500	25,100
Interstate Commission of the Potomac River Basin District of Columbia Pennsylvania Maryland West Virginia Virginia	22,300	22,200	73,000
Bi-State Development Agency Illinois Missouri	17,000	17,100	56,800

	1966 ALLOCATIONS	1967 ALLOCATIONS	1968 AUTHORIZATION a/
Tennessee River Basin Water Pollution Control Mississippi Kentucky Tennessee	$15,400	$15,300	$49,700
Total	$300,000	$300,000	$1,000,000

a/ Tentative allocations under Clean Water Restoration Act of 1966.

Basis for allocation:

2/3 population weighted by per capita income
1/6 population density
1/6 number of "wet" industries

NAMES AND ADDRESSES OF STATE AND INTERSTATE WATER POLLUTION CONTROL ADMINISTRATORS

SELECTED LIST OF PUBLICATIONS ON WATER AND WATER POLLUTION

Publications for the General Reader

Available from Publications Office
Federal Water Pollution Control Administration
633 Indiana Avenue, N. W.
Washington, D. C. 20242

Comprehensive Project Publications

Lake Ontario Program. WP-10. 1966.

Missouri-Souris-Red Rivers Program. WP-21. 1966.

Chesapeake Bay-Susquehanna River Project. WP-27. 1966.

Columbia River Project. 1966.

Delaware Estuary Project. 1965.

Ohio River Project. 1965.

Laboratory Publications

Clean Water for the Southwest. Robert S. Kerr Water Research Center. WP-4. 1966.
Request directly from Robert S. Kerr Water Research Center, Ada, Oklahoma.

Clean Water for the Southeast. WP-8. 1966.
Request directly from Southeast Water Laboratory, Athens, Georgia.

Pacific Northwest Water Laboratory. WP-31. 1966.
Request directly from Northwest Water Laboratory, Corvallis, Oregon.

Clean Water for Alaska. Alaska Water Laboratory. 1965.
Request directly from Alaska Water Laboratory, College, Alaska.

FWPCA Numbered Publications

The New Federal Water Pollution Control Program. WP-2. 1967.
(Under Revision).

Resources to Meet Community Sewage Treatment Needs Under the Construction Grants Program. WP-3. 1966.
(Under Revision).

Klamath Basin Study. WP-9. 1966.
Request directly from Northwest Regional Office, Portland, Oregon.

Your Career and Clean Water for America. WP-11. 1966.

Pollution Caused Fish Kills in 1965. WP-12. 1966.

Sewage and Water Works Construction in 1965. WP-15. 1966.

A Program to Combat Storm Water Pollution. WP-18. 1966.

New Water for Old. WP-19. 1966.

Identification and Measurement of Chlorinated Hydrocarbon Pesticides in Surface Waters. WP-22. 1966.

Storet I. The Storage and Retrieval of Data for Water Quality Control. Public Health Service Pub. No. 1263. 1966.

Storet II. Storage and Retrieval of Data for Open Water and Land Areas. WP-26. 1966.

Water Pollution Control Research and Training Grants. 1966 Grant Awards. WP-29. 1966.

A New Era for America's Waters. CWA-1. 1967.

Guidelines for Establishing Water Quality Standards for Interstate Waters. CWA-2. 1967.

About Boats and Water Pollution. CWA-4. 1967.

Building for Clean Water in 1966. CWA-6. 1967.

Miscellaneous Non-Numbered Publications

Suggested State Water Pollution Control Act, Revised. 1966.

Needed: Clean Water. Scriptographic booklet. (1967 revision in press).

Our Dying Waters. Saturday Evening Post Reprint. 1966.

Chemical 26. Process Magazine of the Pulp and Paper Industry Reprint. 1966.

Industrial Water Pollution Control (Special Report). Mill & Factory Reprint. 1966.

Publications for the Reader with Special Interest

Available from Publications Office
Federal Water Pollution Control Administration
in Limited Quantities

Restoring the Quality of Our Environment. Report of the Environmental Pollution Panel of the President's Science Advisory Committee. November 1965.

Waste Management and Control. A Report to the Federal Council for Science and Technology by the Committee on Pollution, National Academy of Sciences--National Research Council. Publication 1400. 1966.

Alternatives in Water Management. A Report of the Committee on Water Division of Earth Sciences. National Academy of Sciences--National Research Council. Publication 1408. 1966.

A Ten-Year Program of Federal Water Resources Research. Federal Council for Science and Technology, Committee on Water Resources Research, Office of Science and Technology, Executive Office of the President. February 1966.

Marine Science Affairs--A Year of Transition. The First Report of the President to the Congress on Marine Resources and Engineering Development. February 1967.

A Study of Pollution--Water. A Staff Report to the Committee on Public Works. June 1963. Committee Print. Committee on Public Works, U. S. Senate. (This report is now being updated and will be reprinted) 88th Congress.

Steps Toward Clean Water. Report to the Committee on Public Works. Committee Print. Committee on Public Works, U. S. Senate. January 1966. 89th Congress, 2nd Session.

The Adequacy of Technology for Pollution Abatement. Report of the Research Management Advisory Panel, Committee on Science and Astronautics, House of Representatives. 89th Congress, 2nd Session.

U. S. Department of the Interior. Office of Water Resources Research. Water Resources Research Catalog. Part II, Non-Federally Supported Research in Progress. September 1965.

Federal Council for Science and Technology, Committee on Water Resources Research of the Office of Science and Technology. Federal Water Resources Research Program for Fiscal Year 1967. April 1966.

U. S. House of Representatives. Report of the Subcommittee on Science, Research and Development to the Committee on Science and Astronautics. *Environmental Pollution - A Challenge to Science and Technology*. Committee Print. 89th Congress, 2nd Session.

Separating Storm and Sanitary Sewers in Urban Renewal (Water Pollution Control and Abatement). 32nd Report by the Committee on Government Operations, House of Representatives (H. Rept. No. 1648). 89th Congress, 2nd Session.

Federal Research and Development Programs: The Decision Making Process. 34th Report by the Committee on Government Operations, House of Representatives. (H. Rept. No. 1664). 89th Congress, 2nd Session.

Problems and Future of the Central City and Its Suburbs. Message from the President of the United States. House of Representatives. (H. Doc. No. 99). 89th Congress, 1st Session.

Unshackling Local Government - A Survey of Proposals by the Advisory Commission on Inter-governmental Relations. 30th Report by the Committee on Government Operations, House of Representatives. (R. Rept. No. 1643). 89th Congress, 2nd Session.

Preserving Our Natural Heritage. Message from the President of the United States. Transmitting - Programs for Controlling Pollution and Preserving Our Natural and Historical Heritage. February 23, 1966. (H. Doc. No. 387). House of Representatives. 89th Congress, 2nd Session.

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FEDERAL GRANTS FOR CLEAN WATER

Federal Grants for CLEAN WATER

55¢

Federal grants and other financial assistance for clean water

Administered by
Federal Water Pollution Control Administration
U. S. Department of the Interior

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THE GRANT DEVICE has become widely utilized in various programs throughout the Federal government. In water pollution control, grants-in-aid support a growing number of activities, each contributing directly or indirectly to the total effort. Two of these date back to the beginning of the Federal program. The Water Pollution Control Act of 1956 (Public Law 660) authorized grants for municipa waste treatment works construction and fo support of State and interstate agency programs

In its 1961 amendments (Public Law 87–88) to the Water Pollution Control Act, Congres increased the authorizations for both of thes original grant programs and activated anothe —grants for research, training and demonstr tions to be conducted by public and privat agencies, institutions, and individuals. Researc fellowships were authorized to be establishe and maintained.

The Water Quality Act of 1965 (Public La 89–234) brought sweeping changes in the Wat Pollution Control Act and its administratio including further liberalizing of the constru tion grants and the initiation of still anoth grant program—this one supporting researc and development to demonstrate new and ir proved ways to control pollution from combine storm and sanitary sewer systems.

The latest amendments to the Federal Wate Pollution Control Act came with the 1966 er actment of the Clean Water Restoration Ac (Public Law 89–753). Emphasizing the com prehensive basin approach for water quality control, this legislation authorized grants to pay a portion of the expenses of planning agencies to achieve this end. It authorized up to $3.5 billion for a five year period beginning in fiscal year 1967, for grants for waste treatment works construction, removed dollar ceilings on such grants after July 1, 1967 permitted increases from $5 to $10 million for fiscal years 1968–1971 for grants to State and interstate agencies and provided for grants for research and development into new and improved methods to control wastes from municipal and industrial treatment systems and to prevent pollution by industry.

Each of the grant programs administered by the Federal Water Pollution Control Administration is described in this booklet.

Grants for comprehensive basin planning

purpose

The purpose of this grant program is to pay a portion of the administrative expenses of planning agencies which are developing comprehensive water quality control and pollution abatement plans for river basins or portions thereof.

financing basis

The Clean Water Restoration Act of 1966 amended Section 3 of the Federal Water Pollution Control Act to authorize this grant program. No specific amount is authorized.

method of distribution

Section 3 (c) of the Federal Water Pollution Control Act, as amended, specifies that a grant may be made at the request of the Governor of a State or a majority of the governors when more than one State is involved. To qualify for a grant, the agency must provide for adequate representation of appropriate State, interstate, local or (when appropriate) international interests in the basin or portion thereof involved. The agency must be capable of developing an effective and comprehensive plan in accordance with the requirements set forth in Section 3 (c) (2) of the Act. No grant may be made for a period exceeding three years.

matching provisions

No Federal grant may exceed 50 percent of the administrative expenses of the planning agency.

who may receive federal aid

Any agency which qualifies as a planning agency under the terms of Section 3 (c) of the Federal Water Pollution Control Act, as amended.

application procedure

An agency must make its application through the Governor of the State involved, or through a majority of the governors if more than one State is involved. Agencies applying for grant funds should contact the appropriate Federal Water Pollution Control Administration Regional Office. The plan must be developed in accordance with Section 3 (c) (2) of the Act.

past year developments

This grant program was authorized by the Clean Water Restoration Act of 1966.

legal basis

Section 3 (c) of the Federal Water Pollution Control Act, as amended. (33 USC 466 *et seq.*).

Additional information may be obtained from the Office of Comprehensive Planning and Programs, Federal Water Pollution Control Administration, U. S. Department of the Interior, 633 Indiana Avenue, N. W., Washington, D. C. 20242.

Training grants and research fellowships

purpose

Training grants are awarded to universities, colleges and other public and private institutions to expand the base of training and education in the causes, control and prevention of water pollution, and for the purpose of increasing the professional, scientific and technical manpower in this field.

Research fellowships are awarded to individuals for specialized research training in institutions of their choice for the purpose of increasing the number of scientists qualified to carry on independent research in water supply and pollution control.

financing basis

Authorization for appropriations for these activities is found in Section 5 of the Federal Water Pollution Control Act, as amended. For the fiscal year ending June 30, 1966, training grant appropriations were $2,500,000 and research fellowships were $710,000.

method of distribution

Awards are made on the basis of scientific and technical review, competence of individuals, and contribution toward meeting program objectives. Review of proposals is made by intramural and/or extramural panels and individuals as appropriate.

matching provisions

There are no matching requirements for training grants or research fellowship awards. In the case of training grants, it is expected that the institution receiving the grant will bear some of the project cost.

who may receive federal aid

Training grants may be awarded to public and private agencies and institutions and to individuals. Research fellowships may be awarded to any qualified individual.

application procedure

Application forms, instructions, policy and other information may be obtained from the Office of Research and Development, Federal Water Pollution Control Administration.

legal basis

Section 5 of the Federal Water Pollution Control Act, as amended (33 USC 466 *et seq.*).

Additional information may be obtained from the Office of Research and Development, Federal Water Pollution Control Administration, U. S. Department of the Interior, 633 Indiana Avenue, N. W., Washington, D. C. 20242.

Research, development and demonstration grants and contracts

purpose

Grants and contracts are awarded to support and promote the coordination of research, development and demonstration projects (including basic and applied research studies, investigations and experiments) relating to the causes, control and prevention of water pollution. In addition to this general authorization, the Federal Water Pollution Control Act, as amended, authorizes grants and contracts in the following specific areas:

(1) Practicable means of treating municipal sewage or other waterborne wastes to remove the maximum possible amounts of physical, chemical and biological pollutants to restore water quality for repeated reuse;

(2) Improved methods and procedures to identify and measure the effects of pollutants on water uses, including those pollutants created by new technological developments;

(3) Methods and procedures to evaluate the effects on water quality and uses of augmented streamflows to control water pollution not susceptible to other means of abatement;

(4) Assisting the development of projects to demonstrate new or improved methods of controlling discharge into any waters of untreated or inadequately treated sewage or other wastes from storm sewers or combined storm-sanitary sewers;

(5) Assisting the development of projects to demonstrate advanced waste treatment or water purification methods or new or improved methods of joint treatment systems for municipal and industrial wastes;

(6) Research and demonstration projects for preventing pollution of waters by industry, including, but not limited to, treatment of industrial waste.

financing basis

Section 5 of the Federal Water Pollution Control Act, as amended, authorizes a sum not to exceed $60,000,000 for fiscal year 1968 and $65,000,000 for fiscal year 1969 to carry out, in addition to a number of other activities, the research areas described in (1), (2) and (3) above, under *purpose*. Section 6 authorizes the following: $20,000,000 annually for fiscal years 1966 through 1969 for grants and contracts in areas (4), (5) and (6) above; $20,000,000 annually for fiscal years 1967 through 1969 for projects in area (5) above; and $20,000,000 annually for fiscal years 1967 through 1969 for grants in area (6) above.

method of distribution

Projects to receive grant or contract support are selected on the basis of their scientific and technical merit and their contribution to meeting program needs.

matching provisions

There are no matching requirements for contracts. For grants, the following limitations apply:

For projects dealing with storm or combined sewers (area (4) above) and advanced waste treatment and water purification methods or demonstrations of joint treatment systems (area (5) above), no Federal grant may exceed 75 percent of the estimated reasonable cost of the project. For projects in preventing pollution by industry (area (6) above), no grant may exceed $1,000,000 or 70 percent of the project cost.

who may receive federal aid

Contracts may be awarded to public or private agencies and institutions and to individuals.

Grants for general research and development, and projects in areas (1), (2), (3) and (6) above, may be made to public or private agencies, institutions and to individuals. Grants in areas (4) and (5) above may be awarded only to States, municipalities or intermunicipal or interstate agencies concerned with water pollution control.

application procedure

Requests for proposals for contracts are made through the *Commerce Business Daily*. Unsolicited proposals for contracts, and proposals for grants in areas (1), (2), (3) and (6) are made to the Office of Research and Development, Federal Water Pollution Control Administration. Grants in areas (4) and (5) must be approved by the State water pollution control agency prior to processing by the appropriate Federal Water Pollution Control Administration Regional Office.

past year developments

The Clean Water Restoration Act of 1966, which amended the Federal Water Pollution Control Act, provided new specific areas of research, development and demonstrations and increased the authorization for research and development activities.

legal basis

Sections 5 and 6 of the Federal Water Pollution Control Act, as amended (33 USC 466 *et seq.*).

Additional information may be obtained from the Office of Research and Development, Federal Water Pollution Control Administration, U. S. Department of the Interior, 633 Indiana Avenue, N. W., Washington, D. C. 20242.

State and interstate agency program grants

purpose

The purpose of these grants is to assist State and interstate agencies in meeting the costs of establishing and maintaining adequate measures for the prevention and control of water pollution, including the training of personnel of public agencies.

financing basis

Section 7 (a) of the Federal Water Pollution Control Act, as amended, authorized an annual appropriation of $5,000,000 for grants to State and interstate agencies through the fiscal year ending June 30, 1968. The Clean Water Restoration Act of 1966 amended this section to increase the authorization for fiscal year 1968 to $10,000,000, and to authorize an annual appropriation of $10,000,000 for fiscal years 1969 through 1971.

method of distribution

Section 7 (c) of the Federal Water Pollution Control Act, as amended, specifies that the State and interstate agency program grant funds be allotted to the several States on the basis of population, financial need and the extent of the water pollution problem. By regulation, a basic grant of $12,000 is allotted to each State; of the balance of funds available, 66⅔ percent is allotted on the basis of population weighted by the reciprocal of per capita income and 33⅓ percent on the basis of the extent of the water pollution problem (16⅔ percent according to the relative density of population and 16⅔ percent according to the number of industrial establishments discharging industrial wastes). The Act does not specify the basis for allotting funds to interstate agencies. In the past, the sum available to interstate agencies has been allotted among eligible agencies on the same general basis as State allotments, in terms of data on population covered, financial need, and extent of the water pollution problem. The basic grant of $12,000 is not made to interstate agencies.

matching provisions

The matching requirements for States and interstate agencies vary according to per capita income, except that the Federal share may not be more than 66⅔ percent of the cost of carrying out an approved State or interstate agency plan, nor less than 33⅓ percent of the cost. The matching percentage for each State or interstate agency is related inversely to the per capita income of the State or group of States. The Federal share for Guam, Puerto Rico and the Virgin Islands is 66⅔ percent.

who may receive federal aid

Grants are available to States and to interstate water pollution control agencies as defined in the Federal Water Pollution Control Act, as amended.

application procedure

Agencies making application for grant funds must submit a program plan to the appropriate Federal Water Pollution Control Administration Regional Office. Content of the plan is specified in Section 7 (f) of the Federal Water Pollution Control Act, as amended.

past year developments

The Clean Water Restoration Act of 1966 amended Section 7 (a) of the Federal Water Pollution Control Act, as amended, to increase and extend the grant authorization, authorizing $10,000,000 annually for fiscal years 1968 through 1971, and to specify that grant funds be used for training personnel of public agencies.

legal basis

Section 7 of the Federal Water Pollution Control Act, as amended (33 USC 466 *et seq.*).

Additional information may be obtained from the Office of Comprehensive Planning and Programs, Federal Water Pollution Control Administration, U. S. Department of the Interior, 633 Indiana Avenue, N. W., Washington, D. C. 20242.

Grants for waste treatment works construction

purpose

These grants are made to States, municipalities, intermunicipal or interstate agencies to assist in the construction of waste treatment works, including intercepting and outfall sewers, which are needed to prevent discharge of inadequately treated sewage or other wastes.

financing basis

The Federal Water Pollution Control Act (P. L. 84–660) authorized the appropriation of $50,000,000 for each fiscal year for grants for construction of sewage treatment works; amendments in 1961 (P. L. 87–88) authorized appropriations of $80,000,000 for fiscal year 1962, $90,000,000 for fiscal year 1963 and $100,000,000 for fiscal years 1964 through 1967; the Water Quality Act of 1965 (P. L. 89–234) authorized an additional $50,000,000 per fiscal year for 1966 and 1967; the Clean Water Restoration Act of 1966 (P. L. 89–753) authorized $150,000,000 for fiscal year 1967, $450,000,000 for fiscal year 1968, $700,000,000 for fiscal year 1969, $1,000,000,000 for fiscal year 1970 and $1,250,000,000 for fiscal year 1971.

The Federal Water Pollution Control Act, as amended, provides that the first $100,000,000 of funds appropriated for the construction of sewage treatment works shall be allotted among the States as follows: (1) 50 percent of such sum in the ratio that the population of each State bears to the population of all the States, and (2) 50 percent of such sum in the ratio that the quotient obtained by dividing the per capita income of the United States by the per capita income of each State bears to the sum of such quotients for all States. The 1965 amendments to the Act specified that any appropriation in excess of $100,000,000 will be allotted to the States on the basis of relative population only.

method of distribution

Under the Act, sums allotted to a State which are not obligated within six months following the end of the fiscal year for which allotted shall be reallotted to other States having approved projects for which grants have not been made because of lack of funds. Prior to reallotment, these funds may be used to finance supplemental grants for projects where the need for sewage treatment works is attributable in part to a Federal installation or Federal construction activity.

For projects on which construction was started after June 30, 1966, and which are approved by the State water pollution control agency and the Secretary of the Interior, but were constructed without Federal assistance or with a lesser amount of Federal assistance than authorized by law because of a lack of Federal funds, such projects may be eligible for reimbursement of State or local funds used if adequate funds had been available.

matching provisions

Section 8 (b) of the Federal Water Pollution Control Act, as amended by the Clean Water Restoration Act of 1966, specifies that prior to July 1, 1967, a grant may not exceed 30 percent of the estimated reasonable cost of construction or $1,200,000, whichever is smaller, or $4,800,000 in the case of multimunicipal projects. After July 1, 1967, the dollar limitations are removed and the grant may be 40 percent if the State also contributes at least 30 percent, and 50 percent if the State also contributes 25 percent and the project is in conformity with enforceable water quality standards. In metropolitan areas the grant may be increased by 10 percent if the project is in conformity with a comprehensive metropolitan plan (Section 8 (f)). Grantees are required to pay all costs not covered by the Federal grant and to assure proper and efficient operation of the treatment works after completion.

who may receive federal aid

The Act authorizes grants to any State, municipality, or intermunicipal or interstate agency for the construction of necessary waste treatment works. A municipality is defined in the Act to mean any city, town, borough, county, parish, district, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, and an Indian tribe or an authorized Indian tribal organization.

application procedure

The construction grants program is administered in cooperation with the State water pollution control agencies. Application forms are obtained from the State agencies which review the completed applications for conformance with State water pollution control plans and establish a priority for grants. Following State action, the applications are sent to the appropriate Federal Water Pollution Control Administration Regional Office for processing.

past year developments

The Clean Water Restoration Act of 1966 amended Section 8 of the Federal Water Pollution Control Act to increase and extend authorizations for this grant program, and to increase the Federal share of the costs of waste treatment works construction projects when the State pays at least 25 percent and where enforceable water quality standards are in effect.

legal basis

Section 8 of the Federal Water Pollution Control Act, as amended (33 USC 466 *et seq.*).

Additional information may be obtained from the Division of Construction Grants, Office of Facilities Management, Federal Water Pollution Control Administration, U. S. Department of the Interior, 633 Indiana Avenue, N. W., Washington, D. C. 20242.

Appalachian regional development grants for waste treatment works construction

purpose

The purpose of this program is to assist in preventing pollution of the streams of the Appalachian region and to protect the health and welfare of its citizens.

financing basis

Section 212 of the Appalachian Regional Development Act of 1965 authorizes the Secretary of the Interior to make grants for the construction of sewage treatment works in accordance with provisions of the Federal Water Pollution Control Act, as amended, without regard to the appropriation authorization ceilings or to allotments among the States prescribed in the latter Act. Section 214 of the Appalachian Regional Development Act of 1965 authorizes an increased Federal contribution where the State or community cannot meet matching provisions for a program under which they would otherwise be eligible.

method of distribution

The method of distribution is based on achieving the purposes of the Appalachain Regional Development Act and is determined by the following:

(1) The relationship of the project or class of projects to overall regional development, including its location in an area determined by the State to have a significant potential for growth;

(2) The population and area to be served by the project or class of projects, including the relative per capita income and the unemployment rates in the area;

(3) The relative financial resources available to the State or political subdivisions or instrumentalities thereof which seek to undertake the project;

(4) The importance of the project or class of projects in relation to other projects or classes of projects which may be in competition for the same funds;

(5) The prospects that the project for which assistance is sought will improve, on a continuing basis rather than a temporary basis, the opportunities for employment, the average level of income, or the economic and social development of the area served by the project.

matching provisions

Matching requirements are in accordance with the provisions of the Federal Water Pollution Control Act, as amended. On specific recommendation of the Appalachian Regional Commission, grant funds made available under the Federal Water Pollution Control program or under this specific authorization may be increased for this program, up to 80 percent of the total project cost.

who may receive federal aid

States, political subdivisions of States, or local development districts in the Appalachian region are eligible for aid.

application procedure

Applications are made by eligible groups, as listed above, through the appropriate State member of the Appalachian Regional Commission. Only applications for programs and projects approved by a State member as meeting the requirements for assistance under the Appalachian Regional Development Act will be approved for assistance by the Commission.

legal basis

The Appalachian Regional Development Act of 1965 (40 USC Appendix A 204 (1965)) established the regional development assistance program. Section 212 of that Act, "Sewage Treatment Works," provides grant authority and authorizes funds to carry out the section.

Additional information may be obtained from the Division of Construction Grants, Office of Facilities Management, Federal Water Pollution Control Administration, U. S. Department of the Interior, 633 Indiana Avenue, N. W., Washington, D. C. 20242.

Regional Offices

DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION*

NORTHEAST REGION
John F. Kennedy Building, Room 2303
Boston, Massachusetts 02203
Code 617 Tel. 223–7210

MIDDLE ATLANTIC REGION
300 West Main Street
Charlottesville, Virginia 22901
Code 703 Tel. 296–1264

SOUTHEAST REGION
Room 404, 50 Seventh Street, N. E.
Atlanta, Georgia 30323
Code 404 Tel. 526–5737

OHIO BASIN REGION
4676 Columbia Parkway, Room 115
Cincinnati, Ohio 45226
Code 513 Tel. 871–6200

GREAT LAKES REGION
33 East Congress Parkway, Room 410
Chicago, Illinois 60605
Code 312 Tel. 353–5638

MISSOURI BASIN REGION
601 East 12th Street
Kansas City, Missouri 64106
Code 816 Tel. 374–5493

SOUTH CENTRAL REGION
1114 Commerce Street
Dallas, Texas 75202
Code 214 Tel. 749–2161

SOUTHWEST REGION
100 McAllister Street, Room 1802
San Francisco, California 94102
Code 415 Tel. 556–5876

NORTHWEST REGION
Pittock Block, Room 570
Portland, Oregon 97205
Code 503 Tel. 226–3915

Laboratories

ALASKA WATER LABORATORY
University of Alaska Campus
College, Alaska 99735
Code 907 Tel. 479–2252

SOUTHEAST WATER LABORATORY
College Station Road
Athens, Georgia 30601
Code 404 Tel. 548–7234

NATIONAL WATER QUALITY LABORATORY
Old Main Hall, Room 313
University of Minnesota Campus
Duluth, Minnesota 55812
Code 212 Tel. 727–6271

ROBERT A. TAFT SANITARY ENGINEERING CENTER
Cincinnati Water Research Laboratory
4676 Columbia Parkway
Cincinnati, Ohio 45226
Code 513 Tel. 871–6225, x225

ROBERT S. KERR WATER RESEARCH CENTER
P.O. Box 1198
Ada, Oklahoma 74820
Code 405 Tel. 332–8800

PACIFIC NORTHWEST WATER LABORATORY
200 South 35th Street
Corvallis, Oregon 97330
Code 503 Tel. 752–4314

NATIONAL MARINE WATER QUALITY LABORATORY
Liberty Lane at Fairgrounds Road
P.O. Box 277
West Kingston, Rhode Island 02892
Code 401 Tel. 789–9738

Interstate Commissions

	Area Code Telephone	Member States
R. E. Smyser, Jr., Executive Secretary Bi-State Development Agency 818 Olive Street St. Louis, Missouri 63100	314, 231–6299	Illinois Missouri
Thomas R. Glenn, Jr. Director and Chief Engineer Interstate Sanitation Commission 10 Columbus Circle New York, New York 10019	212, 582–0380	Connecticut New Jersey New York
Edward J. Cleary Executive Director & Chief Engineer Ohio River Valley Water Sanitation Commission 414 Walnut Street Cincinnati, Ohio 45216	513, 421–1151	Illinois Indiana Kentucky New York Ohio Pennsylvania Virginia West Virginia
James F. Wright Executive Director Delaware River Basin Commission 25 Scotch Road, P.O. Box 360 Trenton, New Jersey 08603	609, 883–9500	Delaware New Jersey New York Pennsylvania
Robert Bond, Executive Director Klamath River Compact Commission P.O. Box 388 Sacramento, California 95814	916, 445–4403	California
Harold V. Miller, Acting Chairman Tennessee River Basin Water Pollution Control Commission Central Services Building Nashville, Tennessee 37219	615, 741–3011	Kentucky Mississippi Tennessee
Carl J. Johnson, Executive Director Interstate Commission on the Potomac River Basin Transportation Building 815-17th Street, N.W. Washington, D. C. 20006	202, 393–1978	District of Columbia Maryland Pennsylvania Virginia West Virginia
Thomas McMahon, Executive Secretary New England Interstate Water Pollution Control Commission 73 Tremont Street Boston, Massachusetts 02108	617, 742–0281	Connecticut Maine Massachusetts New Hampshire New York Rhode Island Vermont

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*Mailing address prefix

State and Interstate Water Pollution Control Administrators

Code Telephone

ALABAMA 205, 265–2341
Arthur N. Beck, Technical Secretary
Water Improvement Commission
State Office Building
Montgomery, Alabama 36104

ALASKA 907, 586–6311
Commissioner
Alaska Dept. of Health & Welfare
Alaska Office Building
Juneau, Alaska 99801
ATTENTION: Director, Div. of Public Health
FOR: Amos J. Alter, Chief Engineer

ARIZONA 602, 271–4641
Edmund C. Garthe, Director
Division of Environmental Health
State Department of Health
Fifth Floor, Goodrich Building
14th North Central Avenue
Phoenix, Arizona 85004

ARKANSAS 501, 375–4438
Director, Arkansas Pollution Control Commission
1100 Harrington
Little Rock, Arkansas 72201

CALIFORNIA 916, 445–3591
Paul R. Bonderson, Executive Officer
State Water Quality Control Board
2115 J Street
Sacramento, California 95816

COLORADO 303, 338–6111
Frank Rozich, Technical Secretary
Colorado Water Pollution Control Commission
4210 East 11 Avenue
Denver, Colorado 80220

CONNECTICUT 203, 527–6341
William S. Wise, Director
Water Resources Commission
State Office Building
650 Main Street
Hartford, Connecticut 06115

DELAWARE 302, 734–5711
John C. Bryson, Executive Director
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Loockerman Street and Legislative Avenue
Dover, Delaware 19901

DISTRICT OF COLUMBIA 202, 628–6000
William H. Cary, Jr., Associate Director for Environmental Health
District of Columbia Department of Public Health
300 Indiana Avenue, N.W.
Washington, D. C. 20001

FLORIDA 904, 354–3961
David B. Lee, Director
Bureau of Sanitary Engineering
State Board of Health
Box 210
Jacksonville, Florida 32201

Code Telephone

GEORGIA 404, 688–4033
R. S. Howard, Jr., Executive Secretary
State Water Quality Control Board
47 Trinity Avenue, S.W.
Atlanta, Georgia 30334

GUAM 425–143
Ralph B. Hogan, M.D.
Director of Public Health and Welfare
Division of Public Health
Territory of Guam
P.O. Box 128
Agana, Guam 96910

HAWAII 808, 507–711
B. J. McMorrow, Executive Officer
Environmental Health Division
Hawaii Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801

IDAHO 208, 344–5811
Vaughn Anderson, Director
Engineering & Sanitation Division
State Department of Health
P.O. Box 640
Boise, Idaho 83702

ILLINOIS 217, 525–6580
C. W. Klassen, Technical Secretary
State Sanitary Water Board
State Office Building
400 South Spring Street
Springfield, Illinois 62706

INDIANA 317, 633–4420
Blucher A. Poole, Technical Secretary
Stream Pollution Control Board
1330 West Michigan Street
Indianapolis, Indiana 46207

IOWA 515, 281–5345
Arthur P. Long, M.D.
Commissioner of Health
State Department of Health
State Office Building
Des Moines, Iowa 50319
ATTENTION: Paul J. Houser, Director Public Health Engineering Division

KANSAS 913, 235–0011
J. Lee Mayes, Director
Environmental Health Services
State Department of Health
Topeka Avenue at Tenth
Topeka, Kansas 66612

KENTUCKY 502, 564–3770
Ralph C. Pickard, Executive Director
Kentucky Water Pollution Control Comm.
275 East Main Street
Frankfort, Kentucky 40601

Code Telephone

LOUISIANA 504, 342–5797
R. A. Lafleur, Executive Secretary
Louisiana Stream Control Commission
P.O. Drawer FC, University Station
Baton Rouge, Louisiana 70803

MAINE 207, 623–4511
Raeburn W. Macdonald, Chief Engineer
Water Improvement Commission
c/o Dept. of Health & Welfare
State House
Augusta, Maine 04330

MARYLAND 301, 837–9000
James B. Coulter, Chief
Bureau of Environmental Hygiene
State Department of Health
State Office Building
301 West Preston Street
Baltimore, Maryland 21201
and
Paul W. McKee, Director 301, 268–3371
State Department of Water Resources
State Office Building
Annapolis, Maryland 21401

MASSACHUSETTS 617, 727–3270
Mr. Thomas C. McMahon, Director
Department of Natural Resources
Water Resources Commission
100 Cambridge Street
Boston, Massachusetts 02202

MICHIGAN 517, 373–3560
Loring F. Oeming, Executive Secretary
Water Resources Commission
Station B, 200 Mill Street
Lansing, Michigan 48913

MINNESOTA 612, 339–7751
R. N. Barr, M.D., Secretary
Water Pollution Control Commission
Minnesota Dept. of Health Building
University Campus
Minneapolis, Minnesota 55440
ATTENTION: Frank L. Woodward, Director
Div. of Environmental Health

MISSISSIPPI 601, 948–3010
Robert Wright, Executive Secretary
Mississippi Air and Water Pollution Control Commission
P.O. Box 827
Jackson, Mississippi 39205

MISSOURI 314, 635–1684
Jack K. Smith, Executive Secretary
Missouri Water Pollution Board
P.O. Box 154
Jefferson City, Missouri 65101

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State Board of Health
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Helena, Montana 59601

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790 Sukro Street
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NEW HAMPSHIRE 603, 225–6611
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NEW MEXICO 505, 827–2473
Charles G. Caldwell, Director
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NEW YORK 518, 474–2933
Dwight F. Metzler, Deputy Commissioner
New York State Department of Health
84 Holland Avenue
Albany, New York 12208
and 518, 474–2060
Robert D. Hennigan, Director
Bureau of Water Resources Services
New York State Department of Health
84 Holland Avenue
Albany, New York 12208

NORTH CAROLINA 919, 829–3006
Earle C. Hubbard, Secretary
State Stream Sanitation Committee
State Department of Water Resources
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In its assigned function
as the Nation's principal
natural resource agency,
the Department of
the Interior bears
a special obligation
to assure that our
expendable resources
are conserved,
that renewable resources
are managed to produce
optimum yields,
and that all resources
contribute their
full measure to the
progress, prosperity,
and security of America,
now
and in the future.

March 3, 1849

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Federal Water Pollution Control Administration

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